



Queen Margaret University
EDINBURGH

A SERVICE EVALUATION STUDY EXPLORING
THE THERAPEUTIC EFFECTIVENESS
OF A REIKI INTERVENTION IN THE LOCAL
COMMUNITY OF CANCER PATIENTS

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AUTHOR'S DECLARATION

I declare that all the work included in this Thesis is my own except where references have been cited. No portion of work contained in this Thesis has been, or will be submitted in support of any application for any other degree or professional qualification of this, or any other university or institute of learning.

Neha Kunvardia, 2017

ABSTRACT

Objective

To explore the perceived therapeutic benefits of Reiki on health outcomes in a local community of patients attending treatment at a Cancer Treatment Centre (CTC).

Background

Reiki was introduced as a new therapy to enhance the provision of a holistic complementary care package to patients at the Cancer Support Centre (CSC). At the time of its delivery, not a great deal was known about its benefits, thus emphasising the need for a Reiki service evaluation to develop an understanding based on patient experiences concerning its perceived benefits.

Method

An exploratory service evaluation was conducted using an uncontrolled before-and-after design with a group of inpatients (n= 75) and outpatients (n = 25) from the CTC. Reiki therapy was evaluated using an in-house instrument comprising four surveys. Measures were taken at baseline assessment and same-day follow-up in both inpatients and outpatients, with two additional follow-up time points at week two and five for outpatients.

Findings

An exploration of the data indicated that Reiki can provide significant therapeutic relief for the rest of the day and up to one week. Participants felt Reiki was helpful in improving symptoms of pain, tension, calmness, anxiety, stress, low mood, and trouble sleeping. Positive correlations were also found between expectations of Reiki's perceived helpfulness at baseline and perceived symptomatic improvement in tension and calmness at follow-up. Overall, the experiences were positive; 88% of participants stated they were likely to seek Reiki elsewhere and 100% stated they would recommend it to others. These findings demonstrate that Reiki is a valuable complementary therapy that is able to attenuate the stress of cancer, and its provision within hospitals settings can improve supportive care services offered to patients.

Key words: Reiki, Complementary Alternative Medicine, CAM, Sleep, Pain, Tension, Calmness, Anxiety, Stress, Low Mood, Cancer, Oncology, Psycho-oncology, Integrative Oncology, Health Psychology, Service Evaluation, National Health Service, NHS, England.

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GLOSSARY OF ABBREVIATIONS

A&R	Aromatherapy Massage and Relaxation study
AT	Acute Trust
BP	Blood Pressure
CAM	Complementary and Alternative Medicine
CCG	Clinical Commissioning Group
CSC	Cancer Support Centre
CTC	Cancer Treatment Centre
DOH	Department of Health
FOI	Freedom of Information
FT	Foundation Trust
HR	Heart Rate
IO	Integrative Oncology
MHT	Mental Health Trust
NICE	National Institute for Health and Care Excellence
NHS	National Health Service
Q1	Questionnaire 1: baseline assessment
Q2	Questionnaire 2: same-day follow-up assessment
Q3:T1	Questionnaire 3: longer-term follow-up at Time1
Q3:T2	Questionnaire 3: longer-term follow-up at Time2
Q4	Questionnaire 4: exit questionnaire
QOL	Quality of Life
RCT	Randomised Controlled Trial
T1 or Time1	Follow-up at Time1
T2 or Time2	Follow-up at Time2
UK	United Kingdom

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 CHAPTER INTRODUCTION

This chapter will be presented in two parts. Part one provides the reader with an outline of the structure of this Thesis, followed by an explanation of the methodological framework used to study Reiki. A brief outline about the study setting, the aims and rationale in relation to the study context, and how the overall doctoral study came into being has been discussed. The subsequent section introduces the research comprising this Thesis and provides the reader with an overview of the context for this study, specifically detailing the role of Complementary and Alternative Medicine (CAM) within supportive care services. Part two continues with an introduction to Reiki, including its mechanism of action, and an exploration of its therapeutic effects from different paradigms. This part also provides some of the current critiques concerning CAM's therapeutic efficacy from different perspectives, to understand determinants of Reiki use, and its usefulness in clinical practice.

CHAPTER 1 PART 1: INTRODUCTION

1.2 OUTLINE OF THE THESIS

This Thesis covers a six-year period (2010 – 2016) during which preparatory work was undertaken to identify the need for a service evaluation. In addition, an in-house instrument to enable data collection was developed and pretested, a systematic review was conducted to evaluate the effects of Reiki, and a supplementary study was conducted to ascertain the current status of Reiki provision within the English NHS, four years since data collection ended at the CSC.

This Thesis comprises eight chapters, of which an outline of each is presented here. The current **CHAPTER 1** has been introduced within the chapter introduction (see p. 1). The subsequent chapters are arranged as follows:

CHAPTER 2 presents the findings of a structured literature review conducted using a comprehensive systematic approach. The review was undertaken from 2011 to 2013 (in tandem with the development of the in-house measurement tool) to evaluate existing studies for Reiki's effectiveness using peer-reviewed journals in an effort to establish the health outcomes shown to benefit from Reiki. This chapter begins by providing a detailed description of the search objectives and the course of the literature search. The systematic literature search is explained including the search strategies and databases searches, the review framework, the search criteria, data extraction and abstraction processes, and what steps were taken to ensure completeness of the evidence base, and the search outcomes are shown in a flowchart illustrating the review process. The tool used for the quality appraisal process and the rationale behind the choice of the appraisal tool are also addressed. A number of studies have demonstrated the effectiveness of Reiki and a detailed review of the findings from seven methodologically robust studies will be discussed. The review findings are presented in sections commencing with a diagram of the five dependent variable clusters created to enable a coherent form of analysis among psychological and physiological variables when grouped together. The chapter then provides a narrative synthesis of Reiki's therapeutic benefits for each health outcome. Lastly, the final section considers one new study that was identified more recently, since the initial systematic review had been completed.

CHAPTER 3 commences by presenting the initial design considerations undertaken before conducting the Reiki service evaluation, including establishing the Reiki evaluation implementation plans, planning and designing the in-house instrument, and pretesting it using a question-and-answer framework to ascertain its ability to capture patients' perceptions prior to data collection for the study. This chapter then presents a discussion of the methodology incorporating details on the practical aspects of conducting the Reiki evaluation including the study design, setting and recruitment of participants. The ethical considerations of the research are also presented in this section including details about informed consent, confidentiality, and anonymity. The final section of the chapter provides a brief summary of the statistical methods employed.

CHAPTER 4 begins by outlining the methods by which the raw data had been prepared for analysis, and then proceeds to explain methods by which missing data from participants lost to follow-up were handled. The chapter then continues with a presentation of the rationale for the statistical methods adopted, including a discussion of how the baseline, same-day and, longer-term follow-up data will be examined.

CHAPTER 5 presents the results of the Reiki evaluation. This chapter begins by presenting the demographic data for the in-and-outpatient groups. Then the chapter discusses the descriptive and inferential statistical dataset and its significance in relation to the baseline and same-day follow-up for both patient groups. The longer-term follow-up results from the in-house surveys for the outpatient group are presented using graphs to illustrate patient reported outcomes measured over two time-points over the course of a five-week Reiki intervention. The next part of the chapter presents the results of the correlational tests conducted to ascertain the presence of any relationships between patient reported levels of apprehensiveness at baseline, Reiki's perceived helpfulness at baseline, and perceived effectiveness on health outcomes during the five-week intervention period. The final part of the chapter presents the additional feedback data collected at the treatment endpoint pertaining to patients' overall experience of Reiki.

CHAPTER 6 introduces the supplementary study conducted to ascertain the current status (i.e. provision and evaluation) of Reiki within the NHS in England since the CSC service evaluation had been completed. This chapter provides the reader with a summary of the methods used to collect data and the main findings regarding the current provision of Reiki within the NHS

(England), the types of services and departments that offer Reiki within each Trust, and whether Trusts had conducted a formal evaluation of the Reiki service to evaluate its efficacy and benefit to patients. The limitations of the supplementary study are discussed and future recommendations for research are presented.

CHAPTER 7 provides a discussion of the results based on the analyses from chapter five and six and integrates findings with the existing evidence derived from Reiki evaluations conducted at other cancer centres since the study at the CSC had ended. The limitations of this study are explored, and the implications of findings for clinical practice, theory and research are presented.

CHAPTER 8 presents a summary of main findings in relation to the aims and rationale of this study. A discussion concerning the contribution of this study in relation to the existing evidence is also presented. The chapter then discusses the practical implications of the data generated from the Reiki evaluation study to aid local decision making at the CSC with regards to the provision of carrying-over Reiki as part of the portfolio of CAM therapies offered. In addition, the usefulness of these findings as a baseline for benchmarking future Reiki research at the CSC, as well as recommendations for future research has been considered. This chapter concludes by incorporating some final reflections including epistemological and methodological considerations, and personal reflexivity from the researcher.

1.3 THE AIMS AND APPROACH OF THIS RESEARCH

This Thesis discusses research that is post-positivist in its methodology. This approach allows for the influence of human beings and other subjective variables that cannot be directly observed (e.g. Clark, 1998; Guba & Lincoln, 1994) making it well suited to the holistic data generated from CAM research, as is the case for this doctoral study. This section considers the use of this epistemology to bridge the gap between the aims of this research enquiry and the choice of methods (e.g. Houghton, Hunter, & Meskeel, 2012) employed to conduct the research in this Thesis. To understand the rationale for choosing post-positivism as the paradigmatic stance, the researcher outlines first, why the positivist approach did not resonate with the overall aims of this present study, and with the potential future aims to conduct research at the CSC.

1.3.1 Methodological framework used to study Reiki

Positivism in the social sciences is based on the principles of empiricism, asserting that human behaviour is a reaction to external stimuli and like the core belief system with the natural sciences, social phenomena can be observed. In adopting this stance, critical psychologists would argue the attempt to study humans as ‘objects’ using traditional scientific methods is one that is fundamentally misguided given that this rigid, linear, methodical and objective approach to verifying facts fails to appreciate the unique ‘order of meaning’ that lies at the heart of human existence – a continuous process of reflection on personal experiences together with the development of meaningful interpretations of other peoples’ behaviour (Crossley, 2000). Thus, adopting a positivist approach leaves very little scope for latent variables that cannot be directly observed (e.g. subjective perceptions such as views, opinions, feelings and experiences; Guba & Lincoln, 1994). Furthermore, positivist research methods used to obtain this absolute objectivity in the quest for valid and accurate scientific knowledge encompasses statistical techniques of analysis, using quantitative methods (e.g. RCTs, systematic reviews, meta-analyses). Although RCTs are viewed as the ‘gold’ standard because of their rigorous study designs (e.g. Bowling, 2008; Guyatt et al., 1995; Pocock, 1983), the search for objectivity using experimental designs such as RCTs precludes insight into the meaning of situations to people. While positivism can manipulate methodology to control for bias (Guba, 1990) in order to produce generalisable data (Morton, 1990), the suitability of RCTs for CAM research conducted in clinical settings presents interesting challenges and has been the subject of much debate within the social sciences (Richardson, 2000), e.g. RCTs designs being limited in their flexibility for confounding variables, encapsulated within the subjectivity of individualistic behaviour. Silverman (1993) asserts that social science becomes scientific not by conforming to the traditional scientific method, but by adopting methods of enquiry that are in line with the particular topic of study. Bearing in mind this consideration, preliminary decisions taken to identify the appropriate methods to be employed in this Thesis entailed asking fundamental questions concerning the study objectives and outcomes in terms of evaluating the efficacy of Reiki in the context of patients’ subjective experiences. To provide some context, initial plans to evaluate the therapeutic benefits of Reiki in the local community of cancer patients at the hospital was believed to require an evidence-based approach to understanding its effects. The philosophy of what constitutes an evidence-based approach within medicalised institutions such as the hospital site where this study was conducted is based on a more positivist approach with a focus on conducting studies to collect data analysed using statistical methods. An RCT was considered by the CSC as a potential study design because it can provide robust findings,

as required by the local R&D team and the Trust's Clinical Commissioning Group and thereby facilitate an informed decision on the continuation of the provision of Reiki. However, perceptions that funding the long-term provision of a therapy that might be considered non-essential led to the decision to conduct a smaller-scale service evaluation study that could help identify whether a definitive investigation was needed in the future. Typical questions the CSC were seeking to explore with regards to Reiki's effects encompassed the 'what', the 'when', and the 'where'. Plans to answer the 'how' and the 'why' necessitated some degree of certainty in the first instance, that there were potential health benefits from Reiki for cancer patients.

Methods based on deductive logic usually start by using general ideas to develop a scientific theory before progressing towards developing a testable hypothesis (i.e. Popper, 2000), however, existing theory and prior research would be essential to facilitate this process. At the time of conducting this study, there was some degree of uncertainty concerning Reiki's effectiveness in assisting with symptom management due to a lack of published research from similar service evaluations within the NHS setting. In order to answer some key questions to satisfy the needs of the CSC, this enquiry had little intent to answer philosophical questions at this stage but endeavoured to adopt a pragmatic/ realist position based on inductive inference (i.e. an exploration of ideas based on observation that were not theory testing by nature in the first instance) Although, an evidence-based approach to explore Reiki's benefits was desirable, the objective of this bottom-up logic was to allow the formation of ideas to facilitate a clearer understanding of the nature Reiki's benefits for patients which could inform the generation of hypotheses in future studies. In line with the need to produce some quantifiable data, the decision to use survey methods was considered appropriate for this research. Thus, this study focused on collecting quantitative data using an in-house instrument developed specifically for the purpose of the Reiki evaluation.

Accordingly, a post-positivist perspective was adopted as it was considered to fit well with the decision to use a quantitative approach based on the decision to use survey methods to collect patient reported outcome data. This approach also allowed the flexibility to include a more 'subjective' dimension that concerned questions pertaining to patients' feelings about the benefits of Reiki.

1.4 INTRODUCING THE ROLE OF CAM

1.4.1 Overview of the topic

Patients receiving treatment for cancer can experience a number of treatment-related side effects, e.g. cancer-related fatigue, pain, insomnia, anxiety, and depression, which could lead to a negative health-related quality of life (Jackson et al., 2008, as cited in Gonella, Garrino, & DiMonte, 2014). Unfortunately, the inclusion of psychosocial interventions in healthcare delivery for these patients has not kept pace with the increase in evidence of the unmet psychosocial needs of cancer survivors who are either near the end of their treatment plan or having difficulty adjusting to the longer-term effects of cancer treatment (The National Cancer Survivorship Initiative Vision, Department of Health [DOH], 2010). The conventional medical paradigm has traditionally focused on the treatment of cancer, drawing a distinction between cure (the objective goal) and supporting the person's individual path to healing, by reinforcing their sense of feeling 'whole' again (Tavares, 2003) as they attempt to return to life after cancer. Provision of patient-centred holistic services to support the healing process do not form part of the medical curricula, and doctors are often unequipped to support their patients' psychosocial needs (Winslow & Shapiro, 2002). There has been a call for a more patient-centred holistic approach, as patients are increasingly choosing to become experts in their personal health, and have a preference towards taking a more active role in the improvement and preservation of it (Coulter, Parsons & Askham, 2008). In response to the lack of adequate psychosocial support and its consequences, people living with cancer have been found to attempt to regain their sense of control after diagnosis by using CAM therapies to aid healing (Henderson & Donatelle, 2003). UK statistics alone indicate an estimated 7 to 74 per cent of CAM utilisation in cancer patients to supplement their conventional treatment plans (Ernst, 1998; Lorenc, Peace, Vaghela & Robinson, 2010) for alleviation of some of the treatment-related side-effects and for psychological support (for example, to cope proactively with feelings of hopelessness) (Astin, 1998; Söllner et al., 2000).

The National Institute for Health and Care Excellence (NICE), has recognised the need to adopt a more psychosocial approach to accommodate the multifaceted supportive and palliative care needs of adults with cancer. In line with their investigation of the supportive care services regularly accessed by cancer patients, NICE have recommended that complementary therapy services are fully integrated within the patient pathway among the many other services (e.g. psychological, social, and spiritual support) that should be given equal priority alongside

aspects of care as they could be required by the patient at any stage of the disease (NICE, 2004). With this being said, however, there is no universally agreed definition of CAM, but it is clear exclusion from mainstream practices is evident in the similar definitions of CAM by several health authorities which draw on its distinctive differences with conventional medicine. For example, these definitions all suggest that CAM practices are a diverse set of services wholly delivered as part of non-mainstream healthcare practices (e.g. National Centre for Complementary and Alternative Medicine [NCCAM], 2005; National Centre for Complementary and Integrative Health, 2016; The House of Lords [HOL] Committee on Science and Technology, 2000). NCCAM provide a useful classification of CAM therapies which draws on four main CAM groups: mind-body therapies, biological-based therapies, manipulative and body-based systems, and energy therapies. Of these four, energy based therapies are germane to the focus of this Thesis, defined as “systems that use subtle energy fields in and around the body to promote healing” (NCCAM, 2004).

CAM utilisation data indicates services have primarily been accessed privately until recently (Gage et al., 2009; Hollinghurst, Shaw & Thompson, 2008; Lorenc et al., 2010) however, access to CAM therapies are becoming increasingly available through the NHS. Few studies in the NHS had been conducted to establish the efficacy of one specific type of energy-based therapy, Reiki, for patients with cancer. The question as to what extent Reiki therapy provides restorative benefits to promote health and well-being of patients with cancer led to an exploratory investigation for this doctoral study.

1.4.2 Introducing the setting

To provide the reader with an overview, the Reiki service evaluation study considered in this Thesis was conducted at a leading Cancer Support Centre (CSC) in the UK that has been recognised by the DOH (NHS Cancer Plan, 2000) for its provision of cancer management support offered to its patients. The CSC opened in 1993 and was one of the first organisations of its kind to provide support and information to people affected by cancer, by empowering them to cope with all aspects of their cancer journey, from diagnosis to the final treatment plans, and beyond. The CSC was built in response to a pilot study by the research team within the centre, undertaken to establish patient concerns about receiving information and support that were accessible at all stages of their cancer journey. Since its inception, the CSC service model (e.g. identify CAM approaches currently used, conduct pilot studies, test services by conducting

randomised controlled trials etc.) has been adopted by the charity Macmillan Cancer Support, and the CSC has been a catalyst for change in how the psychosocial impact of cancer and its treatment is managed within the UK (Maher, 2008). The team at the CSC work closely with the NHS to ensure that conventional medical practice remains closely integrated with complementary care services resulting in treatment plans dealing with patients as a whole, and not just with the disease. A range of CAM therapies is offered as an integral part of the service at CSC, which works closely with the cancer treatment centre to provide a patient-centred holistic approach to healthcare. Patients can either request a session or consent to a number of sessions comprising an intervention as part of the routinely conducted pilot studies at the CSC. As well as an outpatient service, single CAM treatments are available by a ward-based volunteer therapist service to the very ill inpatients.

The introduction of Reiki therapy into the portfolio of CAM therapies offered to patients at the CSC was part of a pilot project, thus emphasising the need for a Reiki-specific service evaluation. Plans to conduct a service evaluation commenced in 2010 as an attempt to assess the therapeutic benefits conferred through the delivery of Reiki. The Reiki therapists at the CSC had observed a higher patient preference for Reiki compared to other CAM therapies, over a period of time. Patients had reported positive shifts in emotional well-being but without the correct tools to capture some of the therapeutic effects from the patients' perspective, it was challenging to assess the extent of some of these reported benefits. The overall objective of the service evaluation was to, therefore, collect tangible evidence to establish the level of benefit from Reiki based on patient experiences. The findings from this preliminary study would help inform further research into the use of Reiki for people living with cancer, at the CSC. In addition, this study was expected to enable exploration of several practical aspects of conducting research. These include, determining whether Reiki was considered beneficial to patients, assessing the possible demand for Reiki as an adjunct to cancer treatment, testing the recruitment procedures and overall feasibility of conducting Reiki research with inpatient and outpatient groups (i.e. CTC ward times, CSC drop-in appointment availability, determining whether participants found the 'burden' of filling surveys acceptable). Furthermore, data analysis provided the first measure of Reiki for the CSC where, at the outset of this research, little information was known about its provision, and benefits, as a complementary therapy alongside treatment for people living with cancer within the UK, specifically within the NHS.

CHAPTER 1 PART 2: BACKGROUND

1.5 THE HISTORY OF REIKI

Figure 1: Reiki characters in Japanese Kanji

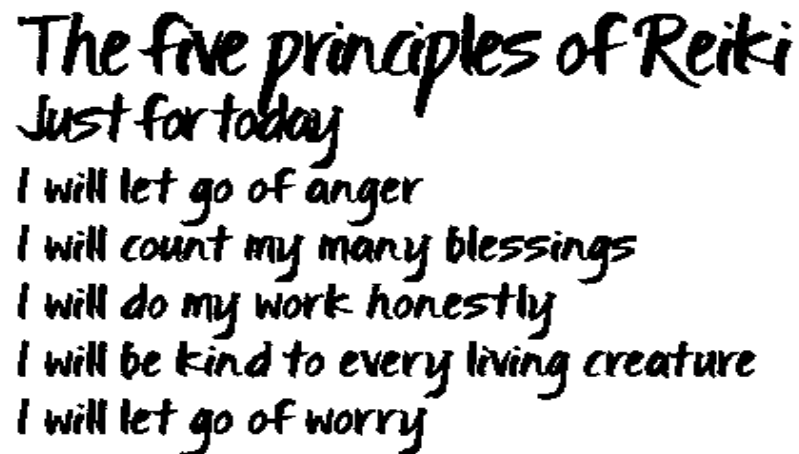


Reiki (written as *Rei* (top) and *Ki* (bottom) as shown in Figure 1 in Japanese Kanji; a character script used to represent ideas rather than syllables) is a traditional system of therapeutic healing derived from the Japanese words ‘Rei’ (meaning spirit) and ‘Ki’ (meaning energy) (Beckett, 2009). Being at the top of the hierarchy (i.e. the meeting place of physical and spiritual realms), Reiki is perceived as the supreme of seven energies responsible for bridging the material universe and the world of pure spirit (Beckett, 2009). The characters signify a deeper meaning that can be understood separately. Rei denotes the deliberate action of bringing ‘rain’; a heavenly power down to Earth; and Ki has a cross-like figure which denotes ‘rice’ – the staple food of human life, whilst the rest of the lines represent the aura of the rice (Beckett, 2009). Together, Rei-Ki is suggested to bring “enlightenment” (another translation of the word Reiki) through the action of summoning the energy of the heaven or greater universe to unite it with the individual’s personal Ki (Beckett, 2009).

Reiki has been practiced for over 2,500 years (Engebretson & Wardell, 2001) since it originated from the Tibetan sutras, and was rediscovered again in 1868 by Dr Mikao Usui, a Japanese monk and spiritual teacher (Catlin & Taylor-Ford, 2011). Reiki was spread from the Eastern to the Western world around the time of World War II by Mrs Hawayo Takata, an Usui trained Reiki master (Nield Anderson & Ameling, 2000), resulting in the Usui system of Reiki as the most commonly practiced method today (Burden, Herron-Marx & Clifford, 2005). Reiki is different from other touch therapies due to the emphasis placed on preparing the practitioner to give healing through the process of a Reiki attunement; a powerful spiritual experience passed into the student through the Reiki master by opening his or her students’ channels to facilitate the flow of Reiki to treat others (Potter, 2003). There are three levels of the Usui Reiki system

(*Shoden, Okuden and Shinpiden Reiki*) and with each level, the student is taught to exercise the flow of healing at higher frequencies (or vibrations). Reciting the five Usui Reiki affirmations or Concepts (see Figure 2 below) is the very basis of Usui Reiki, incorporated into *Hatsurei-Ho*, a traditional meditation technique used at the third level to generate greater amounts of spiritual energy.

Figure 2: Reiki's five main Concepts used as a code of practice

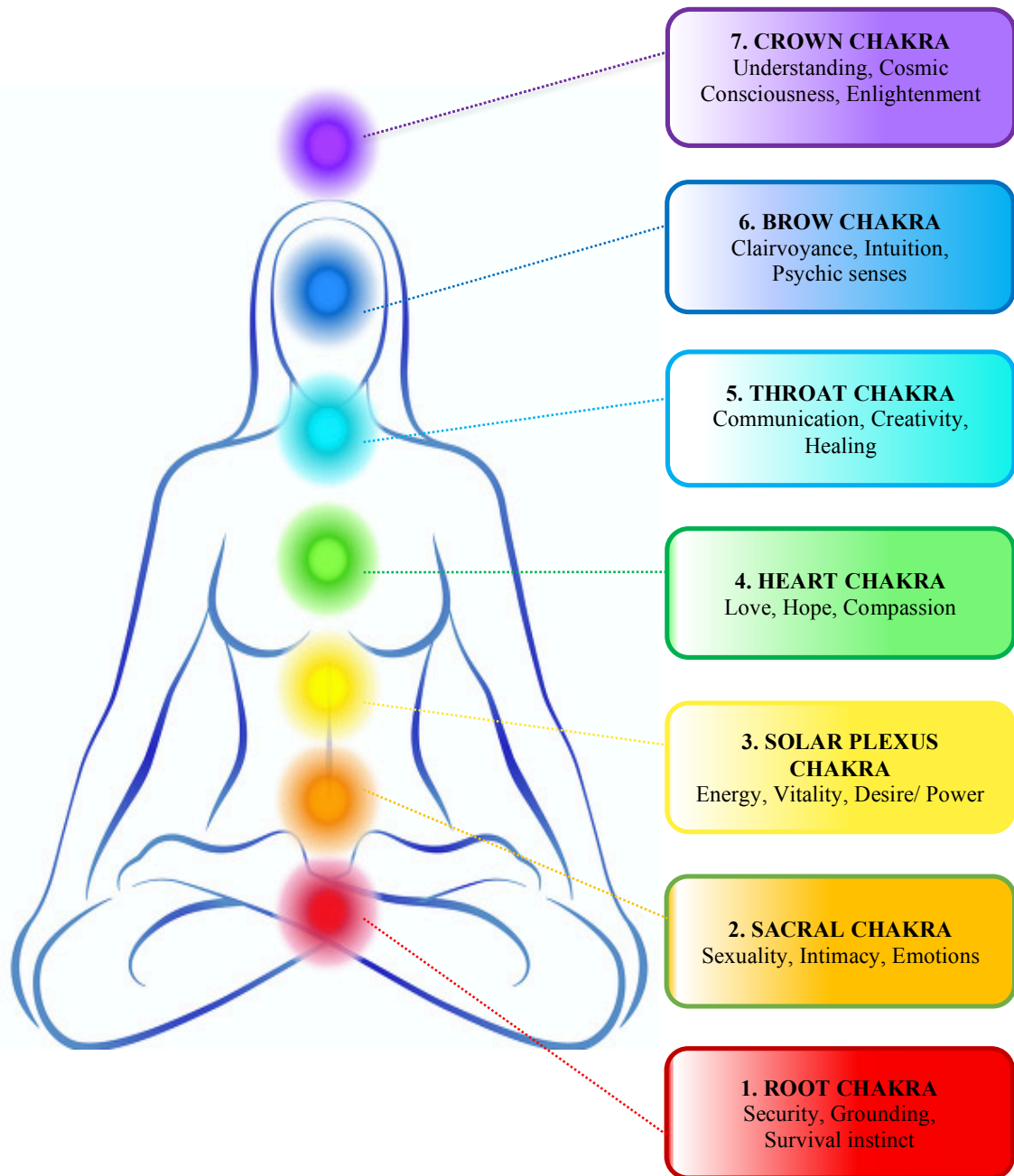


The five principles of Reiki
Just for today
I will let go of anger
I will count my many blessings
I will do my work honestly
I will be kind to every living creature
I will let go of worry

According to Reiki theory, the human body is composed of a set of energy fields (also called meridians or chakras) (see Figure 3 below) that require a constant flow of Ki for sustained health and wellness (Engbretson & Wardell, 2002). Bourne (2009) describes these meridians as spinning independently to each other yet remaining in perfect balance with the natural flow of energy of the body. In line with this philosophical perspective, a disease is the direct consequence of a blockage in a particular meridian when the Ki is no longer able to flow freely (van Wersch, Forshaw & Cartwright, 2009). The smallest disruption in Ki could result in an imbalance of energies in the human body, subsequently altering the individual's health status (Lake, Helgason, & Sarris, 2012) and thus, these meridians are the focal points during Reiki therapy, individualised to each person and their subjective medical well-being (Bourne, 2009). Reiki is a gentle non-invasive practice believed to stimulate a person's own healing response via placement of light touch on, or slightly above, the participant's body (Miles & True, 2003). The energy made available through the practitioner, who acts as a conduit for Reiki, is believed to open up the energy channels on a physical level to help the individual's body reach a greater equilibrium (Miles & True, 2003). By channelling the energy imbalances back into balance (Bourne, 2009; NCCAM, 2012), the practitioner is able to encourage a positive immune

response by stimulating the body back into its natural physical, psychological, and emotional state. Following this equilibrium, the individual is likely to feel an improvement in their willpower to change detrimental habits considered to affect health, e.g. depressive thoughts (Salles, Vannucci, Salles & da Silva, 2014).

Figure 3: The chakra (energy) system



For the Reiki practitioner, the art of successfully delivering Reiki comprises having a certain level of benevolence, consciousness, and an active awareness of being present in the moment (Bossi, Ott & DeCristofaro, 2008). Rand (1998) describes the four principles of Reiki taught to practitioners that could make it an effective intervention for nurses who often experience alterations in the patient's energy field during routine nursing care (e.g. the mutual processes of interaction between humans and environmental energy fields within Rogers' model of the Science of Unitary Human Beings [SUHB]; 1990, 1992). These principles are as follows: (i) to be able to relate to the patient's core or essence, not personality, (ii) to listen without judging patients' actions, (iii) to be willing not to know or understand the "why" associated with patients' presentation and, (iv) to let go of viewing patients' responses following Reiki treatment as the practitioner's personal achievement. The art of practice in Reiki takes the four principles one step further by utilising the vital energy, Ki, instinctively possessed by patients and practitioners, to merge it with the universal healing energy, Rei, by intent to assist the individual with the healing process (Bossi et al, 2008).

Reiki is typically given using 12 prescriptive hand positions (Bossi et al, 2008) and can be given to the individual, fully clothed, lying down, sitting in a chair, awake, asleep, or even unconscious during the treatment (Bossi et al., 2008). Reiki treatments are often tailored to suit the individual's needs; however, 45-90 minute sessions are usually considered the norm (Bossi et al., 2008).

1.6 CULTURAL DIFFERENCES IN IDEOLOGIES OF THE BODY

1.6.1 The role of Reiki healing energy on health and illness

The Eastern and Western models of health informing Reiki research today share a focus on understanding the body by definition of health and illness, but from two very distinct ideologies of what constitutes the human body (deAngulo & Losada, 2015). As discussed in section 1.5 above, Reiki's philosophy of the human body is characterised in terms of 'energy'. According to the principles of Energetic Medicine, there are three basic structures in energy anatomy; these are fields, channels (chakras), and bodies (Dale, 2009). The chakra system postulates that each chakra connected to a specific region of the body (existing both within and outside of the physical body) is connected via respective chakra centres that interact with their corresponding physical and subtle energies (Dale, 2009; Kroneck, 2012). These chakra centres are the connective points where the subtle energy is drawn into the 'subtle body' from an external

source and circulated throughout the body transforming it into physical energy and vice versa, before sending the subtle energy back into the world (Dale, 2009, p.8). This dynamic interaction is believed to serve as a guide to address an energetic imbalance (Kroneck, 2012). As each chakra serves a highly specific function, the practitioner is expected to have an understanding of potential themes and causal issues that might arise from specific types of imbalances. Kroneck (2012) provides an example of an intense flow of energy around the solar plexus chakra during a Reiki treatment, which might be symbolic of the patient having difficulty assimilating (digesting) a life event.

So far, the absence of an agreed theory for how Reiki might work (Miles & True, 2003) means that the mechanism of Reiki energy is considered as a hypothetical construct, and the existence of the Ki is yet to be proven scientifically (Merrifield, n.d.). As a result, Reiki's therapeutic merit rests on philosophically and scientifically ambiguous ground. There are questions concerning its mechanism of action which have occupied the minds of scientists for several years. Scientific advancements in search of a sound theoretical grounding have focused on understanding the basics of energetic principles using frameworks from both the natural and social sciences. Both cases are discussed in this Thesis, respectively (see sections 1.6.2 - 1.6.4).

1.6.2 Understanding Reiki's mechanism of action

Dale (2009) argues that human senses function within a very narrow electromagnetic spectrum range. The eyes are therefore only able to detect radiation that is emitted by substances between the range of 380 to 780 nanometres, otherwise seen as visible light. By extension, Dale contends that humans cannot see what they are incapable of or not trained to see, suggesting that what might appear to be invisible (e.g. subtle energies) is not necessarily non-existent but rather, that we do not have the appropriate equipment required at this time to measure it (Dale, 2009). As the energetic phenomenon, Ki, cannot be directly observed or measured, interpreting manifestations of the human-energy interaction (e.g. SUHB; Rogers, 1990, 1992) includes observing and measuring subjective experiences which are regarded as highly arbitrary (Lake et al., 2012). These factors make the philosophy and practice of Ki, conceptually challenging to accept by the Western system of medicine (Jains & Mills, 2010). In contrast to Western science, Eastern beliefs are embodied within a much more holistic approach, where good health results from a harmony of the Ki which is encompassed within the instinctual mind, body, and the spiritual aspects of all human beings (Chan, Ho, & Chow, 2001; Coulter, 2004). The Eastern

way to understand life to the fullest is, therefore, based on intuition on entering a state of spiritual consciousness (i.e. mysticism; Capra, 1990). As there is little perceived need to verify the existence of an energetic phenomenon which plays such a fundamental role in health and healing, and any effort to do so, it is considered unnecessary (Lake et al., 2012). Dossey (1982) has challenged the Western system of medicine because it fails to consider the fundamental role of human consciousness in the study of healing on health (e.g. the psychological, social and spiritual perspectives of human consciousness). Dossey (1999, 2001) has recommended that a shift is needed by which postulated nonlocal effects of consciousness on illness should be encompassed into Western medicine, to adequately explain reports of what Dossey refers to as ‘miraculous healing’. Emerging theories based on energy medicine have indeed previously focused on illness using fundamental metaphysical assumptions derived from Eastern principles, however, a newly coined term, ‘nonlocal medicine (e.g. Dale, 2009) reflects a more recent effort to amalgamate Western and Eastern beliefs to construct a philosophy which takes the viewpoint that physical reality does not lie within the physical universe, but rather is believed to be within subtle planes and energies that permeate through everything (Dale, 2009). Here, a healing experience is defined by the subtle energies which are part of a larger quantum field which manifests as human consciousness interacting with physical brain structures affecting human mental functioning (Lake, 2007), or physical and emotional functioning (Kroneck, 2012). Moreover, recent advances in physics have been used to explain the existence of energetic phenomena using quantum field theory, and models of energy to rationalise the mechanism of action underlying energy-based therapeutic modalities (Lake, 2007). From a physics perspective, Reiki energy consists of quantum particles which manipulate the electrical or magnetic field produced by the human body (e.g. Rosenblum & Kuther, 2006; Thrane & Cohen, 2014). Although the existence of quantum fields remains unsubstantiated, the use of quantum field theory for the analysis of fields is regarded as an acceptable conceptual framework to investigate interactions between energy and matter (Cao, 1999; Lake, 2007; Yasue, Jiba & Senta, 2001) specifically, its role in health, illness, and healing (Dossey, 1982).

It is evident, that competing models representing cultural world-views have been greatly debated within the philosophy of science over several decades. For example, it has been suggested that differences in the understanding of the human body and its psychological functioning are largely influenced by the cultural and social perspectives of the researcher/practitioner rather than scientific insight derived from the framework within which the researcher/ practitioner was trained (Lake, 2007). The next section considers some of these

disparate perspectives by drawing on the work of Thomas Kuhn (1922-1996) on scientific paradigms to explore this problem.

1.6.3 A science in crisis

Rubin and Rubin (2005) have defined Kuhn's concept of 'scientific paradigms' as a set of basic beliefs that deal with principles about the nature of the social world. In sociological and psychological terms, a paradigm is, therefore, more than just a theory about a particular topic of enquiry, but the way in which reality can be framed to help view the world (Elad-Strenger, 2013). Historically, the dominant Western medical paradigm has encompassed the notion of Cartesian dualism (Rene Descartes, 1952) which represents the metaphysical stance that the mind and body are two separate entities, and which has provided the groundwork for positivism within Western biomedicine (Mehta, 2011). According to this approach (which was considered to be the only legitimate method of scientific enquiry), human beings were viewed as a problem that could be broken down into smaller pieces and then rearranged in a logical order (Mehta, 2011). This is a problematic view of the world from a social sciences perspective as it runs the risk of a distorted and incomplete understanding of the complexity of humans. Thus, in the social sciences in general, and in Health Psychology in particular, both notions of Cartesian Dualism, and logical positivism as the only legitimate method of scientific enquiry have been challenged (Mehta, 2011; van Wersch et al., 2009). In sum, the argument is made that Cartesian Dualism and positivistic approaches are inherently reductionist and thus, lack sufficient explanatory power, particularly in relation to evaluations of CAM therapies (Bengston, 2004; Lake, 2007), like Reiki, and their underlying mechanisms of action.

In questioning the objectivity of scientific discovery, Kuhn (1970) had argued that scientific enquiries are more than just a set of objective, valid, accurate and therefore unchallengeable absolute facts. Rather, he argued that science is a multi-phased process that evolves in a series of paradigms based on a background of theory which has arisen from cultural and social perspectives comprising of a set of human views, values and beliefs about scientific knowledge (Elad-Strenger, 2013; Guba, 1990). By drawing on the work of Kuhn's seminal model of the Structure of Scientific Revolutions (1970), a period of 'normal science' is depicted by views of the world as shaped by its dominant paradigm. Kuhn argued that these paradigms become so embedded within the minds of its scientific community that observations made through them eventually become the only views of reality. Mehta (2011) argues persuasively that by adopting Cartesian dualism as the paradigmatic stance to understand the mind and body, and by engaging

with the ‘scientific revolution’ that positivism brought with it, Western medicine sits at a point of ‘scientific crisis’ today.

1.6.4 A paradigm shift

Based on Kuhn’s model, a paradigm that appears to be valid despite evidence to the contrary, and anomalies in the form of any evidence contradicting the dominant paradigm, are explained as an atypical occurrence (Elad-Strenger, 2013). When the anomalies accumulate, a ‘scientific crisis’ is reached overthrowing previous “maps” of reality by the community and a ‘paradigm consensus’ is concluded which is then resolved by a ‘paradigm shift’, in search of powerful new insights to investigate old contradictions (Johnson, 1990). The emergence of a new paradigm opens the door for novel methods of observation and exploration, that is ‘scientific revolution’, and a new period of normal science commences to support future scientific enquiries henceforward (Lake et al., 2012).

Johnson (1990) describes today’s healthcare system as illustrative of a recent paradigmatic shift. The new understanding of the world acknowledges that all phenomena are interrelated and individual parts cannot be analysed based on their individual qualities; that the mind and body are a unit and treating the patient as the whole person is regarded as greater than treating the sum of his or her individual parts. In accordance with this understanding, the holistic perspective corresponds to the historical development of medicine and healthcare today (deAngulo & Losada, 2015). The emergence of the holistic paradigm can be viewed as a critique of, and in response to, the inherent limitations of a reductionist approach to viewing phenomena as discussed above. It allows for a more comprehensive view of what it means to be human, in line with the changing healthcare system and the needs of its patients (Johnson, 1990). As with all new paradigms, the holistic paradigm does not completely oppose the assumptions comprising previous or other coexisting paradigms but rather, acknowledges these alternative assumptions as providing a more inclusive view of the world (e.g. Zigler, 1978).

The philosophy of CAM is synonymous with Eastern beliefs, and the Eastern philosophy rests comfortably within the holistic paradigm of health. For example, the discourse of CAM, and its conceptualisation of healing concerns more than just physical malfunction; rather, it involves restoring health to the whole person. Hanegraaff (1998) in his etic evaluation of the meaning of healing, contends that it is this very philosophy that constitutes, what is, the proper domain of “healing” (Hanegraaff, 1998, p. 43). Here, the individual is seen as having spiritual,

emotional and physical aspects, all of which are closely related to their surrounding environment. Moreover, the body is believed to have an innate health-promoting healing ability which is accentuated when all these factors are aligned (e.g. Macpherson, 2014; van Wersch et al., 2009).

Additionally, the Biopsychosocial Model (BPSM) (Engel, 1977) with its overarching narrative imbedded within the philosophy of holism is a comprehensive model used to understand health as a manifestation of biological, psychological, and social factors. The application of this model in context allows for human beings and their subjective realities to be understood and examined as a whole, in the context of their interaction with the environment (deAngulo & Losada, 2015). Thus, the BPSM provides a theoretically congruent framework to understand the therapeutic efficacy of CAM. Despite mixed views concerning its usefulness today (i.e. too broad/ vague to act as a guide for practitioners; Nassir Ghaemi, 2011), Coulter (2004) suggests that it is perhaps in the area of CAM that the BPSM is most pertinent because CAM therapies seek to treat the person as a whole.

Holistic healthcare is able to offer a more patient-centred and all-inclusive approach and is, therefore, likely to be of particular relevance to people living with chronic illnesses (e.g. Sundberg, Halpin, Warenmark, & Falkenberg, 2007; Templeman & Robinson, 2011). Langweiler and McCarthy (2015) advocate its use as a conceptual framework particularly for evaluating CAM interventions with a view to understanding the psychological and social processes which could help facilitate better health outcomes for people living with chronic illnesses. In light of the challenges faced over the years to integrate CAM into Western systems of medicine, the notion of healing the whole person has so far, been beyond the reach of conventional medicine where the dominance of the biomedical model is still apparent today (Langweiler and McCarthy, 2015; Macpherson, 2014). Appropriately, an evaluation of CAM therapies using new methodologies for effectively assessing CAM should aim to strive to be as objective or neutral as possible (i.e. post-positivism; Clark, 1998). The new paradigm of holistic healthcare presents interesting opportunities to investigate mainstream healthcare practices that have evolved outside of the realm of biomedical medicine, derived from diverse cultural and theoretical principles (Langweiler and McCarthy, 2015). As Kuhn outlined, a paradigm is more than a theory about a particular domain; it is a novel way of looking at the world to interpret its reality. Here, the role of modern-day researchers in pursuit of an 'estimation of the truth' (rather than total objectivity), when confronted with evidence demonstrating that a particular CAM

treatment works, is not to deny or reject any possibility of healing. Instead, it is their responsibility to modify the theory to explain the evidence in a way that enables science and medicine to advance together (Adams, 2007).

1.6.5 Integrative healthcare as an emerging paradigm

While Kuhn's revolutionary theory is renowned in the history and philosophy of science (Elad-Strenger, 2013) where its application is central to understanding science as a system of paradigm-based normal science, that experiences revolutionary episodes, anomalies, and innovative developments in response to consensus (Dougherty, 1980); critics of Kuhn's theory argue that a single paradigm is often inadequate, especially when several conflicting objectives must be considered and reconciled. For example, Wall and Carraro (2009) argue that multiple paradigms should harmoniously coexist particularly when studying human subjectivity in order to account for conflicting perceptions of health and disease. Relevant to this argument is modern-day efforts to embrace a spirit of holism by incorporating psychosocial factors into end-of-treatment medical outcomes, reflecting the need to apprehend how patients respond to their illness across multiple dimensions, both biological and non-biological (Langweiler and McCarthy, 2015). The emergence of integrative healthcare as a measure of holism, suggests an effort to humanise healthcare through a shift from the previous focus on patient healing based on physical correlates (i.e. biology and chemistry) towards a model concerned with healing the whole person and acknowledging the role of universal life forces (e.g. Ki) manifested within the mental, physical and spiritual aspects of healing (Ross, 2009). In this sense, integrative healthcare represents a single, unified, meta-paradigm which adopts a neutral perspective, acknowledges different philosophical orientations, and allows these orientations to coexist in harmony (Coulter, 2004; Langweiler and McCarthy, 2015).

People living with cancer are increasingly choosing to combine CAM therapies with their conventional treatment protocols (Seely, Weeks & Young, 2012). In an effort to understand the whole person and their unique story, a proliferation of words from "holistic" to "alternative" and from "alternative" to "complementary and alternative" and more recently to, "integrative medicine" has been rife (Langweiler and McCarthy, 2015, p.7). By effectively integrating CAM practices into medicine within the NHS, integrative healthcare (including integrative medicine and integrative mental health) is an example of a genuine 'Kuhnian paradigmatic shift' (e.g. Bausell & Berman, 2002) in the sense that Kuhn had outlined, which sits comfortably within the biopsychosocial approach to care.

Several paradigms have recently emerged under the ‘integrative’ classification which share a common philosophy of patient-centred, whole-person, and all-inclusive evidence-based care, that is considered safe to use (Seely et al., 2012). For example, the ‘Integrative Mental Health’ (IMH) paradigm suggests the recent shift from the dominant Western model of mental health care to a newer approach concerned with prevention and maintaining wellness using a ‘bio-psycho-socio-spiritual’ patient-centred approach to understanding mental health and illness (Lake et al., 2012). This evolving paradigm of IMH can be viewed as a ‘conceptual bridge’ that strategically aims to reconcile the disparate viewpoints between non-Western systems of medicine with Western biomedicine (Lake et al., 2012). In their paper examining IMH as an alternative model within psychiatry, which traditionally follows the conventional Western system of medicine, Lake et al., (2012) address some of the limitations of this model by advocating the provision of an integrated approach through the expansion of Western medicine to incorporate a more inclusive paradigm of IMH that addresses some of the philosophical and clinical tenets of integrated healthcare. These include: adopting a bio-psycho-socio-spiritual paradigm; acknowledging individuality when using a ‘whole-person’ approach; using evidence-based conventional and CAM therapies in an integrated manner; having consideration for the psychological, social, and spiritual narratives of the patient; placing emphasis on preventing illness and promoting mental ‘wellness’; educating and empowering the patient; and providing a compassionate and ‘person-centred’ clinical approach (Lake et al., 2012). In addition, the authors recommend that Western medicine should remain open to clinical practice comprising of traditional healing systems; they propose the integration of ‘mind-body’ therapies (i.e. yoga, meditation) and energetic concepts embedded within psycho-spiritual therapies (i.e. energy based CAM therapies such as qigong or Reiki) to explain normal consciousness and underlying causes of illness. By way of illustration, Lake et al. (2012) suggest that a referral for an appropriate evaluation to a CAM practitioner might be useful to establish confounding factors affecting complaints of insomnia/ irritability (once their biological causes have been ruled out); both potentially treatable using mind-body modalities such as acupuncture. In other instances, an evaluation of an ‘energetic imbalance’ using energy-based modalities could help elucidate the underlying nature of the symptoms in order to devise a plan to help the patient make beneficial changes for the duration of their treatment plan. Tataryn’s (2002) classification of CAM modalities using the four paradigms of health and illness (used for understanding disease and prevention) is a useful framework to propose the most appropriate CAM treatments to patients. For example, the body-paradigm encompasses modalities that work by targeting the biological factors as the primary determinants of health,

while the mind-body paradigm is an extension of the body paradigm and comprises of modalities which target primary determinants of health and disease such as stress, coping styles and social support. The body-energy paradigm comprises of modalities that are based on the assumption that health and disease are functions of the flow and balance of life energies (i.e. energy medicine/ Reiki; discussed previously in section 1.6.2). Finally, the body-spirit paradigm is based on the principles of mysticism and assumes health and disease are influenced by the combined effect of a synergy of one or more factors from outside the material universe (Tataryn, 2002).

As a rapidly emerging subspecialty in oncology, ‘Integrative Oncology’ (IO) (also known as psychosocial oncology and psycho-oncology) has recently evolved to help reduce some of the side-effects from conventional treatments and help to improve symptoms, enhance emotional health, well-being, and improve overall QOL (Sagar, 2009). Together, both IMH and IO healthcare aim to engage the ‘whole person’ (i.e. the body, mind, spirit and community; Abrams & Weil, 2014) by combining evidence-based practices including, but not limited to CAM therapies, into a unique program developed to match the needs of the person (Abrams & Weil, 2014; Lake et al., 2012). The overall objective of IO programmes is to promote health by assisting the patient to play a more active role in their own healing process through the provision of an increased number of strategies that are made available to patients with cancer (e.g. Abrams & Weil, 2014; Lake et al., 2012; Rinpoche, 2005). Pertinent to this Thesis, is the integration of CAM practices, specifically concerning Reiki, within cancer programs and services within UK-based hospitals and cancer centres, to provide patients, access to services throughout the cancer spectrum. Although determinants of CAM use in people living with cancer have shown substantial variability, the next section discusses specific factors associated with Reiki use among this population of users as a complement to their cancer treatment plans and considers reasons for its increasing prevalence within IO departments.

1.7 EVALUATING DETERMINANTS OF CAM USE WITHIN INTEGRATIVE ONCOLOGY

1.7.1 Spiritual aspects of healing

People living with cancer often experience significant psychological and spiritual changes alongside the biological change from their illness (Mao et al., 2010). According to Ross (2009), experiencing a health-related challenge or a healing crisis can often open up the realm of the

spiritual. Spirituality is considered an important part of secular life and it is not uncommon when the gift of good health is interrupted that an individual develops a sense of gratitude for life. Turning to spirituality at this time has been identified as an adaptive coping strategy, enabling the individual to make meaning of their illness and to appreciate well-being which may have been taken for granted previously (e.g. McCaffrey, Pugh & O'Connor, 2007; Miles, 2007; Pargament, 1997; Ross, 2009). People living with cancer have been found to utilise CAM therapies that are congruent with their spiritual and philosophical orientations to complement their conventional treatment plan (e.g. Astin, 1998; Furnham & Beard, 1995). Spiritual healing through CAM use has been suggested to help the inner transformative healing process in order to enable the individual to make sense of their illness as they adjust to life post-diagnosis or redirect the illness experience to something more meaningful (Mulkins & Verhoef, 2004; Taylor, 2003; Perreault & Bourbonnais, 2005). Spiritual healing support through CAM use has been reported to help improve medical outcomes by acting as a buffer between the treatment and its side effects such as pain, anxiety and mood disturbance and thus, helping the individual to tolerate their conventional treatment plan (Deng et al., 2007) and to maintain optimal functioning as well as a positive outlook towards life (Miles, 2003). For example, in a study by Bowie et al. (2004) concerning survivors of prostate cancer, men who had stronger religious views and turned to faith were found to have better coping strategies with regards to their cancer and subsequent treatment decisions. In another study by Elkin et al. (2007) with mothers of children diagnosed with cancer, women who scored higher on religious beliefs were found to report positive coping outcomes as well as score lower on the depression scale, when compared to their counterparts.

Kelner & Wellman (2001) report that patients seeking a spiritual focus have been found to be attracted to less mainstream therapies such as Reiki. Reiki has frequently been described as a therapy that preserves values that support the emotional and spiritual needs of the cancer patient (Rand, 2001, as cited in Burden et al., 2005; Fleisher, Mackenzie, Frankel, Seluzicki, Casarett, & Mao, 2014), thus, making it a valuable complement to supportive and palliative care services where the art of caring and healing is fundamental to supporting QOL in the absence of a cure (e.g. Bullock, 1997; Burden et al, 2005). Reiki has been reported to help individuals access the inner resources they require to turn what might be a frightening experience into a time of spiritual transformation and fulfilment (Mulkins & Verhoef, 2004; Schiller, 2003). Whether Reiki has a religious affiliation, or not, it is commonly used as an adjunct to improve QOL alongside patients' cancer treatment protocols to attenuate the treatment side effects (Berenson,

2007). It is frequently described in the literature as stress-reduction technique that promotes healing (e.g. Munshi, Ni, & Tiwana, 2008), however, Miles (2007) argues it is not a stress-reduction technique and recommending it as one, poses a risk to its integrity as a functional therapy that helps individuals connect with their innate spirituality.

1.7.2 Therapeutic usefulness of the CAM consultation process

Several factors contribute to the utilisation of CAM therapies, but the most commonly reported reason for why patients use CAM has been identified as dissatisfaction with their conventional care (e.g. Furnham, 2003; Williams et al., 1995). For example, in a study by Williams and colleagues (1995) exploring patient expectation versus patient satisfaction with their medical consultation. The majority of patients expected an ‘explanation of the problem’ with regards to the cause, course and prognosis of their illness, and this unmet need (i.e. inadequate understanding) was the cause of discrepancy between patients’ expressed need (i.e. expectation) and actual outcome (i.e. satisfaction) (Williams, Weinman, Dale, & Newman, 1995). Similarly, Sørensen and colleagues (2004) have reported that cancer patients have higher expectations to be fully informed on issues pertaining to their diagnosis, prognosis, treatment options, likelihood of success, and expect to actively participate in their consultation process (Sørensen, Rossel & Holm, 2004). Several researchers have found that a failure to meet these expectations results in unhappiness, a common predictor of CAM use among this population of users (Kelner & Wellman, 2001; Sharma, 2001; Williams et al., 1995). With that being said, only a small number of individuals have had unrealistic expectations of CAM use (e.g. Ritvo et al., 1999) while most CAM users have been found to acknowledge its established usefulness as a complement to conventional care (Thomas, Griffiths, Kai, & O’Dwyer, 2001). While both conventional medicine and CAM endeavour to bring relief through better control of the patients’ symptoms, the focus of CAM on holism and individualism appears to be more in line with a more comprehensive conceptualisation of well-being (e.g. van Wersh et al., 2009) where the patients are proactively involved in the maintenance of both their treatment and their health (Bertakis, Roter, & Putnam, 1991; Kelner & Wellman, 1997; van Wersch et al., 2009). Thus, the object of the CAM consultation has been to create a collaborative, patient-centred and personalised therapeutic approach, one that is highly valued by CAM users (e.g. Cartwright & Torr, 2005; Scott, Verhoef, & Hilsden, 2003), by focusing on the patients’ emotional needs (Willison & Andrews, 2004), addressing their psychosocial concerns (Bertakis et al., 1991), and enhancing the patients’ well-being and sense of control over their health rather than addressing the illness alone (Verhoef et al., 2005). For example, a study by Long (2009)

exploring a specific CAM modality (Shiatsu), and its capacity to promote health and well-being, found that four-fifths of participants were more inclined to make positive lifestyle changes (e.g. resting more, relaxing, exercising and modifying their diet) between baseline and the six-month follow-up as a result of having CAM treatment. The findings of this study demonstrated that individuals who showed an ‘openness or readiness to change’ were found to value the supportive care environment facilitated by a positive patient-practitioner relationship, as part of taking better control of their own health (Long, 2009, p.8).

1.7.2.1 The role of the CAM therapist and the placebo-healing response

The role of the therapist in a CAM encounter relationship can be better understood as a natural healer (i.e. someone who has an inbuilt healing potential) who is able to create a safe and comfortable environment for his or her patient and thus, act as the facilitator of a process of ‘transformational healing’ (Reilly, 2001). In an effort to create this environment, Brody (1997) argues that therapists must be able to i) provide an understandable explanation of the patients’ illness, (ii) demonstrate care and concern and, (iii) resist from making claims to cure the patients’ symptoms. On the other hand, Hawkins (2001) has argued that these 3 features increase the likelihood of a positive placebo healing response from the patient – a response that has been demonstrated in several studies examining the influence of context effects (i.e. doctor-patient relationships) on positive health outcomes (e.g. Bugel, Groenier, & Roordink., 2001; Di Blasi & Kleijnen, 2003). For example, an RCT-designed study by Kaptchuk et al. (2008) looking at context effects on placebo responses in patients with irritable bowel syndrome, found that patients who received placebo acupuncture in a supportive therapeutic encounter were more likely to report improved outcomes than patients who received the same treatment in the context of a neutral encounter. The findings from this study emphasise that patient placebo responses are impacted by the therapists’ social behaviours such as conveying positive expectancies about acupuncture, actively listening, being empathetic and expressing warmth and friendliness.

The role of placebo healing responses in CAM research has been the subject of much debate over the years, especially with regard to differences in approaches taken to measure its effectiveness (e.g. Richardson, 2000). Criticisms of CAM have largely concerned its conceptualisation of the mind-body relation, its lack of objectivity in its methods of scientific

enquiry, and the non-generalisability of research findings. Criticisms of this kind have led to a call for a more positivist approach such as RCTs to measure its effects (van Wersch et al., 2009). Lake (2007) asserts that although this method of scientific enquiry represents a valid way of measuring treatment effectiveness in relation to biomedical outcomes, RCT designs fail to effectively address the complex subjective meanings associated with illness as well as the intersubjective quality of the healing experience (van Wersch et al., 2009). Lake (2007) differentiates between Western medicine and non-Western systems of medicine by proposing that the provision of a cure on the whole, ideally should be suited to the needs of the patient and specifically adapted to the psychological, somatic, spiritual, or energetic causes of their mental and emotional symptoms. Thus, a biomedical model based method of enquiry would be of limited value (Lake, 2007). Thompson and colleagues (2009) discuss placebo responses from a broad anthropological perspective, asserting, that although in clinical trials, the role of placebo effects is viewed as a phenomenon that impedes a clearer understanding of the therapeutic effectiveness of a particular treatment, in CAM practice, it is considered potentially beneficial and should be encouraged in order to maximise the person's ability to heal (Thompson, Ritenbaugh & Nichter, 2009).

The notion of cultivating the placebo response in practice (i.e. by a therapist) to elicit positive therapeutic outcomes has been previously proposed by Brody and Waters (1980). Specifically, they argue that the placebo response could be seen as a powerful therapeutic diagnostic tool by which the therapist provides the patient with a 'meaning-centred' explanatory framework to help make sense of their illness experience within a sociocultural context (Brody, 1997; Brody, 2000; Brody & Waters, 1980). Similarly, Bootzin and Caspi (2002) use their 'cognitive model for the placebo effect within the therapeutic process' to explain that the role of the therapist within the interaction is to cognitively reframe the meaning the patient has assigned to their illness. According to this model, the mutual relation between the therapist and patient is a collaborative effort by which the therapist is able to generate a plan of action that positively affects the patients' interpretation and understanding of their own health status, thereby enabling patients to reframe the meaning of their medical condition. In turn, the process of 'cognitive reframing' is expected to result in the following outcomes: (i) a placebo/ nocebo effect (i.e. positive effects resulting from positive expectations or negative effects from negative expectations) and accordingly, (ii) the development of a coping strategy that forms the basis for future ongoing health behaviours (e.g. adherence/ compliance to treatment) (Bootzin & Caspi, 2002). Several other authors concerned with examining the placebo healing response

in relation to patient health outcomes have justified the phenomenon as one that is inevitable within the healing context, and one that is indispensable if it affects the person with positive outcomes (e.g. Caspi, 2003; Frank, 1984; Heron, 2001). Benson and Friedman (1996) and Caspi (2003) contend that by instilling hope, positive beliefs and expectancy, patients are provided with optimal care that promotes emotional arousal (e.g. Frank, 1984). This, in turn, encourages and empowers patients to see themselves or their illness differently, thereby leading to improved health outcomes. Papakostas and Daras (2001) argue that there is subjectivity in the meaning of illness such that each individual will associate a different meaning with their experience. A therapeutic encounter is therefore likely to produce a placebo response if the patients' meaning of their illness experience is steered in a positive direction (e.g. patient feels actively listened to, receives a comprehensible explanation for their illness, patient feels cared for) and thus, the notion of providing patients with the enhanced ability to manage their illness and/ or associated symptoms are implicated here. However, in line with this view, Bootzin and Caspi (2002) also emphasise the importance of ensuring that the patient does not develop idealistic positive expectations about their health that might be unattainable.

Caspi (2003) and Reilly (2001) extend the notion of a beneficial placebo healing response by explaining the phenomena as an innate homeostatic self-healing predisposition that lies within the person; an activation of the placebo response signifies a point at which the person's inner body allows a genuine self-healing effect to take place, and is further reinforced when both the patient and therapist bring themselves to a point of complete honesty. In a similar vein, several other researchers have viewed this highly inter-subjective healing response as arising from the therapist's competence, optimism and sincerity.

1.7.2.2 Theorising CAM placebo-healing responses

In sum, the placebo healing response in relation to CAM therapies appears to be a highly context specific phenomenon that is driven by several mechanisms. While critics claim that CAM therapies produce positive effects because they are placebos decorated as therapies (Kaptchuk & Eisenberg, 1998), several other explanations for the placebo response have been recently suggested. Emerging literature recognises placebo responses as processes that are driven by interactions between several factors, encompassing both psychological and biological factors. A discussion for each follows. The placebo healing response resulting from alternative influences such as a direct embodied experience, over and beyond that of conscious awareness, in the therapeutic encounter, is also been considered from a broad anthropological perspective.

1.7.2.2.1 Psychological perspectives of the placebo response

Expectancy effects, memory, and desire

Thompson et al. (2009) propose the concept of ‘expectancy effects’ to explain the placebo response. The concept of expectancy, defined as “the experienced likelihood of an outcome or an expected effect” (Price, Finniss, & Benedetti, 2008, p. 571), is based on the premise that a person who is able to alter their expectations is likely to benefit from a particular therapy in the context of a healing encounter. While most of the attention in relation to expectancy has been focused on the activation of the placebo healing response within the patient, Bootzin and Caspi (2002) emphasise the significant role of the therapist in “charg[ing] the intervention” with positive expectations and hence, providing an environment that supports the patient’s ability to activate a placebo healing response (Thompson et al., 2009). Kirsch (1997) extends the notion of expectancies further by proposing the concept of the ‘response expectancy’, defined as “the anticipation of one’s own autonomic reactions to various situations and behaviours” (Kirsch, 1997, p. 69). Using an example of a beverage, Kirsch argues that feelings of enhanced alertness after a decaffeinated coffee (unknown to the individual) are based on the beliefs about the effects of caffeine and the expectation that the cup of coffee will enhance alertness (Kirsch & Weixel, 1988). In line with Kirsch’s (1990) response-expectancy theory, it seems reasonable to hypothesise that the potential for a specific CAM therapy to deliver short-term effectiveness might be imbedded within the person’s expectation for subsequent pain reduction. In this way, the person apprehends the therapeutic encounter as one that will attenuate adverse symptoms and improve illness experience overall. This has been demonstrated in a two-part study assessing the determinants of a placebo effect by Price et al. (1999). The authors of this study looked at the effects of expectancy on the magnitude of the healing effect (i.e. placebo analgesia) and found that the intensity of actual pain was determined by levels of expected pain. Post-treatment outcomes were established by manipulating the level of pre-treatment pain that participants expected to experience. Participants were given the exact same intensity of cutaneous pain using a heat stimulation device after applying placebo cream to the forearm. They were advised that cream A was a strong analgesic, cream B was a weak analgesic, and cream C was a control agent. The findings from this study showed that the magnitude of actual pain experienced (cream C > B > A) was based on the level of expected pain (C > B > A) indicating an interaction between pain expectations and symptom intensity.

By extension, Price et al. (1999) also demonstrated that memories of previous experiences are likely to influence present experiences of pain too. The authors measured the placebo effect by

taking concurrent (immediately after stimuli) and retrospective (two minutes after stimuli) ratings of pain. The findings indicated that retrospective ratings of pain (i.e. ‘remembered pain’) showed a healing effect was three to four times greater in magnitude than the concurrent ratings. These findings suggest that post-treatment reduction in pain may be enhanced by distorted memories of pre-treatment pain (i.e. remembering the intensity of pain at baseline as being larger than it actually was), resulting in exaggerated self-reports of pain relief following treatment. This finding is consistent with other studies also demonstrating the effects of memories of chronic pain on perceptions of relief (e.g. Feine, Lavigne, Thuan Dao, Morin, & Lund, 1998; Linton & Melin, 1982; Mathias, Dillingham, Zeiger, Chang, & Belandres, 1995).

The third factor considered to play a mediating role in producing a placebo response is desire, defined as “the experiential dimension of wanting something to happen or wanting to avoid something happening” (Price et al., 1999, p. 572). In understanding factors that might contribute to the therapeutic effectiveness of CAM, it is important to acknowledge that desire might play a role for a particular therapy to significantly relieve symptoms, as might the expectation that a particular outcome will be relieved after therapy. The synergistic interaction between desire and expectation in eliciting an emotional response (e.g. anxiety, sadness, relief; Price, Barrell, & Barrell, 1985; Price, Reilly, & Barrell, 2001) is outlined in the Desire-Expectation model of emotions by Price and Barrell (1984). The model predicts that a placebo healing response is best potentiated when there is a desire for, and an expectation that, a therapy will provide relief. These findings have been consistent across several studies demonstrating an interaction between desire for pain relief and expected pain relief as the main factors contributing to pain reduction or pain intensity (e.g. Price et al., 1999; Vase, Robinson, Verne, & Price, 2003; Verne, Robinson, Vase, & Price, 2003 (discussed above)). In the context of analgesia studies, Price et al. (1999) state that it is reasonable to assume that individuals might have a desire to avoid, reduce or completely eliminate ongoing pain. Therefore, the desire for pain relief might be associated with an increase in positive emotions resulting in pain relief based on the need to experience a therapy as efficacious (Price et al., 1999), also known as the self-fulfilling prophecy; a positive feedback loop between ideas and beliefs influenced by expectations which create their own reality as those expectations become true (e.g. Merton, 1948). In social processes, this phenomenon can also influence the meaning or value associated with a particular object (Crum & Phillips, 2015), or in the context of this dialogue, therapeutic effectiveness.

Self-efficacy

Patients living with chronic illness may choose to take responsibility for the effective long-term treatment of their symptoms by participating in health-related activities (e.g. CAM use; Arcury et al., 2006; Thorne, Paterson, Russell & Schultz, 2002) that could lead to positive changes (Burekhardt, 2005). The interaction between self-management and self-efficacy has been established in a few studies. For example, Menzies, Taylor, and Bourguignon (2006) have suggested that though self-efficacy is the underlying mechanism, both factors are intertwined together. In this sense, self-efficacious people have higher performance expectations and are more motivated to engage in health-enhancing behaviours which in turn, reinforces their self-efficacy further (e.g. Gatchel, 2004; Menzies et al., 2006). In a study conducted by Ritvo et al. (1999) to understand the motivations of cancer patients seeking to use CAM, findings suggested self-efficacy was activated as one of the six cognitive processes among this group of users, and their desire to use CAM was understood as a self-healing motivation which contributed to their psychological and physical well-being. Bootzin and Caspi (2002) refer to this interactive process between self-management and self-efficacy as a positive feedback loop which enables patients to believe their illness experience is manageable. An individual's ability to effectively manage or minimise their symptoms based on their own sense of control concerning their personal ability was first described in the literature by Albert Bandura. In his later work, Bandura (1997) argued that perceived self-efficacy is an important predictor in determining a placebo healing response because of the role it plays in improving the person's ability to initiate and maintain a positive change in their illness experience. By example, Bandura (1997) demonstrated the interrelation between self-efficacy and pain management; an individual's ability to manage acute and chronic pain, and timeframe, to endure mounting levels of imposed pain are significantly improved by their self-efficacy beliefs.

1.7.2.2.2 Biological perspectives of the placebo response

Neuropsychological/ biological mechanisms

So far, psychological mechanisms to explain placebo healing responses have elucidated relationships between cognitive and emotional factors encompassing variables such as expectations, desire, and self-efficacy, however; explanations of interactions between psychological and biological factors (i.e. mind-brain interactions) have also been described in the literature to identify ways by which these might covertly drive placebo responses.

Research suggests placebo responses are more than subjective response biases but in fact, have biological underpinnings observed through actual effects on the brain and body (Price et al., 1999), providing a useful framework to explain the benefits of CAM interventions. For example, Pariente, White, Frackowiak, and Lewith (2005) demonstrated the expectation phenomenon in relation to pain relief within a therapeutic encounter in patients with osteoarthritis. Specifically, they found the expectation of benefits from receiving ‘a real treatment’ of acupuncture was associated with a powerful non-specific activation effect in the regions of the brain (i.e. right dorsolateral prefrontal cortex, anterior cingulate cortex and, the midbrain) responsible for completing higher order executive functions, e.g. processes required for cognitive control of behaviour such as pain modulation and reward expectation. Other studies evaluating the effects of patient expectations on the therapeutic outcome have also observed significant correlations between positive outcome expectations from acupuncture and outcome improvement (e.g. impact of patient expectations following dental surgery, Bausell, Lao, Bergman, Lee & Berman, 2005; and in chronic pain, Linde et al., 2007).

Furthermore, placebo responses have been used to demonstrate a strong association between psychological and neurobiological processes. For example, a double-blind RCT study by Mayberg et al. (2002) investigated the functional neuroanatomy of the placebo effect in relation to the administration of Fluoxetine, an active antidepressant (AD) drug versus an inactive placebo AD drug to hospitalised men diagnosed with major depression, over a period of six weeks. The findings showed that a placebo response was associated with changes (i.e. reduced neural activity but increased metabolic activity) in glucose metabolism in the cortical and paralimbic regions of the brain (i.e. primary and secondary sites of drug action), indicating drug-specific effects common to reciprocal regions affecting patients who responded to the active AD drug. The authors of this study concluded that an interaction between explicit psychological factors (i.e. patient expectation of improvement and by altering the therapeutic environment) and biologic factors are able to implicitly reduce clinical symptoms of major depression, irrespective of whether they were administered Fluoxetine or the inactive placebo drug.

1.7.2.2.3 Anthropological perspectives of the placebo response

Embodied experiences to translate consciousness

Although, considering every perspective is beyond the scope of this chapter, one last perspective that is germane to the notion of placebo healing is that of an embodiment. While, psychological and cognitive perspectives provide useful explanatory mechanisms to understand placebo responses within the realms of conscious awareness, neither rests on a viewpoint that is philosophically ‘conscious’ by nature (Thompson et al., 2009, p. 13). By extension, Thompson and colleagues have argued that research on placebo responses has been experientially deprived of an evaluation encompassing the role of direct experiences and implicit perception. Both factors could provide an important explanatory mechanism to understand placebo healing in CAM’s therapeutic effectiveness.

According to anthropologists, the body is understood as the penultimate multisensory organ and the placebo effect, as the locus of lived experience (e.g. Merleau-Ponty, 1964, as cited in Thompson et al., 2009). In this regard, multi-sensorial experiences of being-in-the-world (e.g. through sight, smell, taste, touch etc.) are filtered through consciousness and stored as a memory that is inscribed or ‘embodied’ directly into the body. Embodied experiences can also be channelled into objects, spaces, and places and elicit powerful multi-sensorial experiences (e.g. Cartwright, 2007; Low, 2003; Richardson, 1982). These experiences are only secondarily deciphered into conscious meaning when direct experiences (e.g. sensations, emotion) activate the embodied memories of previous experiences, including positive and negative healing experiences (Nichter, 2008). So far, there has been limited emphasis on the positive therapeutic effects of embodiment in placebo healing responses and efforts to do so have been dismissed by Biomedicine as placebo effects (Thompson et al., 2009). However, recently, there is emerging evidence demonstrating placebo healing responses can be unconsciously activated by objects too such as a placebo pill or places such as the decor within the doctor’s or acupuncturist’s office (Thompson et al., 2009), promoting optimal healing environments that are often automatically characterised by re-experiences of healthful sensations (Frenkel, 2008). Proponents of this philosophy have argued that there is symbolic significance in the multi-sensorial experiences elicited unconsciously by objects and places and their ability to affect response outcomes. In this sense, a placebo healing outcome should not be defined by consciously cognitive processes such as expectation and desire for an improved outcome, but rather, in relation to the body as the site of interface with the physical, social, and cultural world

which bypasses conscious awareness, and responds directly to sensory or affective stimuli (Thompson et al., 2009).

1.8 CHAPTER CONCLUSION

Part 1 of this chapter introduced the reader to the context in which this study was conducted, specifically discussing the role of CAM in supportive care services. The rationale for this doctoral study has been discussed in the light of an absence of previous empirical evaluations of Reiki and its therapeutic effectiveness. This part presents a discussion of positivism and reasons why this perspective was rejected in favour of post-positivism as the underpinning philosophical perspective; followed by a discussion of the subsequent methodological approaches used to study Reiki. Part 2 considers the conceptual bases of Reiki by drawing on Kuhn's work on scientific paradigms to explore its mechanism of action from different cultural and social perspectives. The emerging paradigm of integrative healthcare is considered before discussing some of the determinants of CAM use within oncology services. Lastly, CAM's therapeutic efficacy has been broadly critiqued (presenting Reiki-specific evidence when possible) in an effort to understand its usefulness within clinical practice.

As discussed, at the time of writing this Thesis, research findings indicated a high demand for Reiki in people with cancer, however, there was a paucity of high-quality evidence to justify its use. Studies are either inconclusive or contradictory, highlighting the need for larger, more robust studies. While maintaining this stance, the researcher is aware that by adopting a theoretical perspective that is post-positivist by nature due to humans being a factor in this research conducted to evaluate the idiosyncratic nature of CAM and its holistic benefits, findings from this doctoral study cannot be absolutely objective or conclusive. However, evidence-based medicine has traditionally been based on the premise that clinical practice and health policy are based on the best evidence available. This includes evidence derived from methods using quantitative techniques such as randomised double-blind trials (Fernandez, et al., 2015; Hampton, 2002). With this supposition in mind, the researcher accepts that studies which adhere to principles of an RCT design could help to provide a more evidence-based approach to developing the initial understanding required by the CSC about Reiki's potential benefits to people living with cancer. Accordingly, the next chapter aims to address this need by reviewing evidence on Reiki's therapeutic effectiveness from more rigorous study designs.

CHAPTER 2

LITERATURE REVIEW OF RCT DESIGN STUDIES

2.1 CHAPTER INTRODUCTION

There is some evidence as discussed in chapter one pointing towards the possible health-related benefits from Reiki therapy. In the absence of published findings from similar service evaluations conducted within cancer centres to determine its potential within mainstream healthcare, a more evidence-based approach was adopted to develop an understanding and contextualise its plausible benefits on cancer-related symptoms.

This present chapter aims to provide the reader with a detailed overview of the main findings from a systematic review undertaken from 2011 to 2013 to review scientific literature from peer-reviewed journals, in an attempt to ascertain its therapeutic benefits. The review process was conducted over several stages however this chapter will make an effort to discuss the main findings from the seven studies evaluating the effects of Reiki on a range of health outcomes known to affect people with cancer. A more recent review of the Reiki literature identified one RCT study conducted since this review was completed and will be discussed towards the end before concluding the chapter.

2.2 OBJECTIVES

The objective of this systematic review was to examine the effects of Reiki therapy on health outcomes known to affect people living with cancer during data abstraction, by reducing the volume of searches yielded until only the final number of studies with only the essential characteristics was reached. More specifically, the review aimed to:

- Review the current status of clinical Reiki research at an international level.
- Evaluate existing studies for evidence of Reiki's effectiveness using peer-reviewed journals.
- Establish the health outcomes shown to benefit from Reiki.
- Establish the reported benefits with a focus among the cancer population.
- Critically appraise the methodological quality of these studies.

2.3 SEARCH STRATEGY

The electronic databases searched included Medline, PubMed, PsychINFO, Cinahl, Embase, Amed, The Cochrane Library, and the Psychology and Behavioural Sciences Collection. Computerised databases of "grey literature" material were also searched to identify unpublished studies using the databases OpenSige, Aggressive Research Intelligence Facility (ARIF) Methodology & Reviews Database, ProQuest Central, and EThOS – Beta (British Library catalogue). Broad search strings were developed to ensure a comprehensive study identification process; initial searches included all study types, and all health outcome indices that the searches returned were considered so that the important studies were not omitted in error. A date restriction of ten years was applied between 2001 - 2011, to ensure that searches yielded the most recent developments in the area of Reiki intervention in cancer to rationalise the problem statement for the forthcoming service evaluation. The top-level search terms were: cancer, coping, stress, Reiki, and therapeutic touch. Additional searches were also performed using combinations of the following key search terms: psychological adaptation, adaptation, neoplasms, emotion focused coping, emotion-focused coping, emotion, coping patterns, psychology, psychological, coping strategies, and psychological adjustment. Only studies published in English were included. Hand searches were conducted to reference available literature from 2002 to 2012 in the Holistic Nursing Practice, and the Journal of Alternative and Complementary Medicine. Original authors of studies were contacted directly if further

information was required with regards to their study findings, and could not be obtained by means of electronic searching.

2.4 REVIEW FRAMEWORK

Conventionally, the inclusion criterion is well defined with tight control applied during the initial stage of the review to reduce variability in search results. In the case of this systematic review, no explicit hypotheses were generated from the beginning with regards to participants, interventions and the health outcomes of interest as the researcher had limited knowledge about the effects of Reiki. Hence, conclusions were drawn based on a comprehensive literature search process. Some heterogeneity between studies was expected at the data abstraction level in this review as the researcher endeavoured to: (i) explore the subject as extensively as possible, and (ii) exclude superfluous search characteristics by reducing the inclusion criteria during the course of the review process, down to essential study characteristics of interest only. The final number of studies ($n = 7$) was considered too small to detect patterns without the review leading to inconclusive findings (Petticrew, 2006). The decision to conduct an investigation by excluding clearly defined hypotheses meant that a meta-analysis was considered unsuitable for the purpose of this review. A narrative synthesis framework was adopted to study the literature base (Popay et al., 2006) comprising a methodologically disparate (heterogeneous) group of interventions.

2.5 SEARCH CRITERIA

The main criteria used to separate Reiki from a number of energy-based complementary therapies (e.g. healing touch or therapeutic touch) were the explicit use of the word 'Reiki' in the study. This also included studies using alternative variants of the name, e.g. Reiki as a touch therapy. The search process commenced with inclusion of references that met the following criteria:

- Randomised Controlled Trials (RCT) design studies.
- Studies comparing the effects of a 'Reiki' intervention with no Reiki controls (including different therapy); rest; waiting list; or sham Reiki placebo.
- Studies looking at the treatment effects of Reiki on adults in cancer and healthy groups.

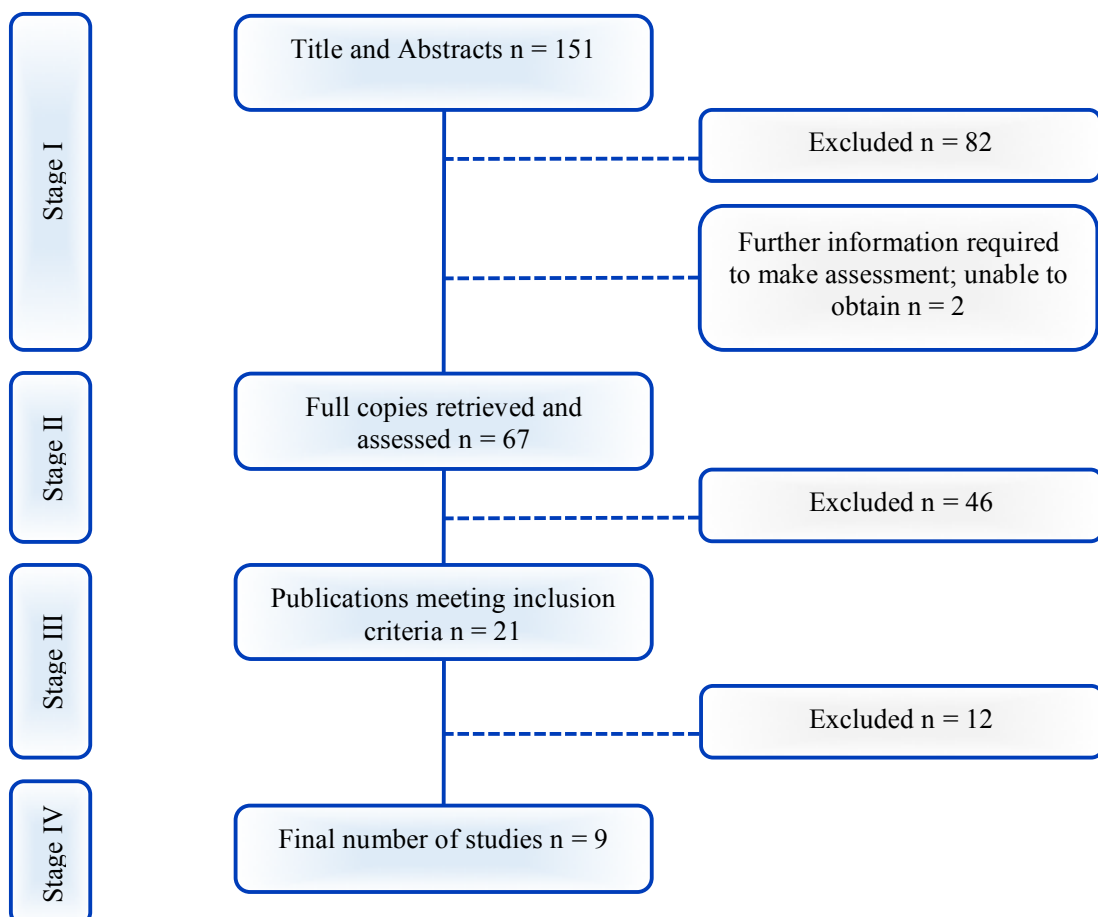
2.6 DATA ABSTRACTION AND EXTRACTION

Data were collected over four assessment stages (see Figure 4) and level of precision was increased with progression from one stage to the next to ensure that the included studies underwent a rigid protocol (i.e. an increase in the methodological rigour with each assessment stage). Available data were extracted onto a data extraction form by reviewer one and independently checked for accuracy and detail by reviewer two based on recommended guidelines (Petticrew & Roberts, 2006).

2.7 SEARCH OUTCOME

The preliminary search returned 374 potentially relevant articles. This increased to 398 with the addition of 9 grey literature sources, 4 papers retrieved by making direct contact with authors, and 11 were identified during the hand search. 247 papers were excluded leaving 151 for detailed abstract review. Figure 4 below shows the flowchart of the search process for the systematic review process.

Figure 4: Flowchart of review process



2.8 QUALITY APPRAISAL

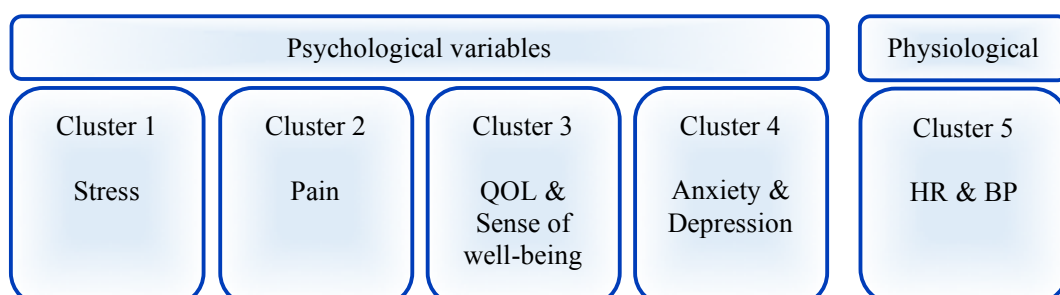
Nine studies (Beard et al., 2011; Bowden, Goddard, & Gruzelier, 2010; Catlin & Taylor-Ford, 2011; Mackay, Hansen, & McFarlane, 2004; Olson, Hanson, & Michaud, 2003; Potter, 2007; Richeson, Spross, Lutz, & Peng, 2010; Shore, 2004; Tsang, Carlson, & Olson, 2007) had met the criteria but their inclusion in the review was subject to assessment against a quality appraisal process to ensure that they met a minimum quality criteria. The modified Jadad quality appraisal tool (Jadad et al, 1996) was used to assess the methodological quality of RCTs where double blinding is not feasible (e.g. complementary therapies; White & Ernst, 1999; Petticrew, 2006) because participants would be cognisant of their assigned condition (i.e. Reiki versus rest condition) and equally, providers of Reiki would be cognisant of their therapist status (i.e. Usui trained Reiki practitioner versus sham Reiki provider). An overall study score (between 0-5; 0 being the weakest, 5 being the strongest) was obtained based on the quality of reporting around three key methodological features: (i) randomisation method, (ii) blinding method, and (iii) patient withdrawals and dropouts.

None of the nine RCTs scored a maximum of 5 Jadad points: three studies scored 4 points (Bowden et al., 2009; Catlin & Taylor-Ford., 2011; Potter, 2007); four studies scored 3 points (Beard et al., 2011; Olson et al, 2003; Richeson et al., 2010; Shore, 2004). Two studies scored 2 points (Mackay et al., 2004; Tsang et al., 2007). These two studies were considered of poor methodological quality and were excluded from further reviewing. The table of quality appraised studies showing where specific points were awarded and/ or deducted for the nine Reiki studies can be located in the Appendices (see [Appendix A](#)).

2.9 REVIEW FINDINGS

A number of health outcomes (dependent variables) emerged in the included studies. Dependent variables were grouped together based on their trend to be investigated together in more than one RCT, to enable a coherent subgroup analysis amongst similarly grouped variables. Figure 5 illustrates these collective variables as clusters from the seven RCT studies.

Figure 5: The five dependent variable clusters



2.9.1 Reiki's effects on psychological outcomes

2.9.1.1 Effects of Reiki on stress

Two studies looked at the effects of Reiki on stress (Bowden et al., 2010; Shore, 2004). Bowden et al. (2010) conducted a single-blind trial among a group of healthy health psychology undergraduate students ($n = 35$), to investigate whether differences in health and well-being (incorporating the stress variable) existed between groups who received Reiki versus who did not receive Reiki. A total of 350 Reiki treatments were delivered over the course of a 2.5 to a 12-week intervention. Participants were randomly allocated to one of three groups: (i) conventional self-hypnotic relaxation with verbal visualisation of healthy immune function, (ii) conventional self-hypnotic relaxation plus animated scenario of healthy immune function, (iii) verbal instructions of deep relaxation. The groups were divided further into Reiki and no-Reiki, and thus, comprising a total of six groups. The Depression, Anxiety and Stress Scale (DASS) was used to measure stress before-and-after the 20-minute interventions. Additionally, two saliva samples (pre-and-post salivary cortisol) were taken as an indicator of stress levels (cortisol is understood to be a stress hormone; Evans & Hucklebridge, 2000, as cited in Bowden et al., 2010). The findings indicated a significant reduction on the stress subscale of the DASS measure ($p < .001$) for participants who received Reiki compared to an increase in stress scores of participants who did not receive Reiki. A near significant interaction between anxiety and depression with stress was also detected ($p < .057$). No changes in salivary cortisol were found ($p = 0.728$). The authors of this study concluded that the Reiki group felt significant benefit on stress, which helped them buffer a substantial decline in health during the academic year compared to the no-Reiki group. While these findings could serve as a good assessment for Reiki's effects on stress, it must be noted that a baseline disadvantage was observed through higher scores on the Illness Symptoms Questionnaire in the Reiki group (i.e. suggesting a higher presence of illness symptoms two weeks around the intervention) than the no-Reiki group. Thus, the findings are confounded by the possibility that Reiki might have offered a greater degree of improvement and were more advantageous to this group. The authors of the study also recognise the biases associated with the lack of a double-blind design (i.e. the investigator's presence throughout all interventions) that could have affected the overall results and have acknowledged this as one of the study's main limitation.

On the other hand, the second study by Shore (2004) assessed the long-term effects of Reiki on self-perceived stress (and depression) using a double-blind trial design. Participants' who expressed self-perceived symptoms of stress ($n = 45$) were selected at random from a larger

group, all of who showed an interest to participate. As Reiki energy can be administered by placing the hands either on or above the body (i.e. hand-on Reiki or distance healing Reiki), the author of the study wanted to determine whether the effects of Reiki were due to Reiki energy and not due to the light touch during hands-on Reiki. Participants were randomly assigned to one of three groups: (i) hands-on Reiki, (ii) distance (non-touch) Reiki and, (iii) distance Reiki placebo (control group). All three interventions encompassed a 60-90 minute session, once a week for the course of six weeks. The pre-and-post Reiki intervention stress levels were measured using the Perceived Stress Scale (PSS); to measure the degree to which the individual appraises a life-situation as stressful.

On completing the intervention, the findings indicated a significant reduction before-and-after the intervention in self-perceived stress in the Reiki group compared to the control group. However, no differences were found in the PSS scores between the hands-on and distance Reiki groups. Overall, greater reductions in stress symptoms were established in the distance Reiki group at the post-intervention assessment but not for the placebo control group. It can be concluded from the findings of this study that Reiki was effective in reducing stress symptoms irrespective of whether Reiki was administered hands-on or at a distance (another location miles away). Interestingly, Reiki treatment group scores on the PSS continued to decrease up to a year since data collection indicating the effects of Reiki were beneficial in the short and long-term. These findings were compared to the placebo group who were found to exhibit higher stress symptoms a year later ($p < .05$). The author concluded the study by ruling out the possibilities of a placebo effect and surmised Reiki energy was effective in reducing symptomatology exhibited by individuals experiencing stress. Further research was proposed to explore and integrate these findings into mainstream healthcare.

2.9.1.2 Effects of Reiki on pain

Two studies evaluated the effects of Reiki on pain (e.g. Olson et al., 2003; Richeson et al, 2010). Olson et al. (2003) conducted a study comparing self-reported pain with Quality of Life (QOL) and analgesic use in a sample of cancer patients ($n = 24$) over a period of seven days. Participants were assigned to one of two arms: standard opioid therapy plus rest (Arm A), or standard opioid therapy plus Reiki (Arm B). Participants were administered their first afternoon analgesic dose and then either rested or received Reiki on day 1 and 4 depending on their allocated Arm. The timing of the Reiki intervention corresponded with an approximation of when pain reduction was likely based on the opioid dose administered prior. Pain assessments

were taken on both of these days, immediately before-and-after Reiki/ rest period using the Edmonton Staging System (ESS) designed to predict outcomes of cancer pain (i.e. mechanism of pain, psychological distress, cognitive function etc.). The findings of this study showed a significant improvement in pain on day one ($p = .035$) and a further improvement by day four ($p = .002$) in Arm B, compared to the resting Arm A. The findings of this study did not suggest a significant reduction in opioid use over the course of the seven-day intervention in either Arm A or B however; the authors concluded the pain data were confounded by a number of reasons: (i) placebo effect and lack of control group (placebo/ sham touch), (ii) no significant opioid use reduction observed possibly due to the short study period, (iii) patients advised by doctors to maintain prescription medication despite feeling better and, (iv) study participants were close to end of life. The findings help develop an understanding as to Reiki's lifespan with effects reported to last approximately 2-3 days post-Reiki. Finally, the authors raise some awareness with regards to the potential coexistence of anxiety and depression in pain perception and conclude an investigation aiming to evaluate these factors in addition to pain, as a future recommendation.

Richeson et al. (2010) have addressed this limitation by looking at the effects of Reiki on pain with anxiety and depression, however; this study was conducted among a group of community-dwelling older adults ($n = 20$). This study had two objectives: (i) to evaluate the effects of Reiki on pain (and depression/ anxiety/ elevated HR/BP) using quantitative measures (ii) to understand experiences of Reiki using qualitative methods. Participants who had a medical diagnosis of pain or other conditions associated with pain (e.g. musculoskeletal, psychological, inflammatory conditions) were randomly assigned to a Reiki group (experimental) or wait-list (control) group. The experimental condition was conducted one day per week over an eight-week period comprising of (i) pre-Reiki pain measurements using the Faces Pain Scale (FPS) tool, (ii) a 30-minute Reiki treatment and, (iii) a post-Reiki pain measurement. The FPS scores suggested significant decreases in pain ($p < .001$) compared with the control group. Furthermore, the qualitative component of this study supported the quantitative findings; Reiki provided beneficial change in overall pain, specifically neck and shoulder pain, both throughout the study and at the post-Reiki intervention interview. Interestingly, the authors suggest that the pain reduction might have been the consequence of Reiki's therapeutic capacity to induce a relaxation response – a theory supported by the evidence-based research on pain and trouble sleeping by the National Institutes of Health Technology Assessment Panel on Integration of Behavioural and Relaxation Approaches into the treatment of Chronic Pain and Insomnia (NIH,

1996, as cited in Richeson et al., 2010). The authors concluded that although the pain findings are in line with Olson et al's (2003) study, they must address two limitations that might have confounded these results: (i) a pre-existing level of readiness to treat pain due to voluntary recruitment, (ii) the use of music during the intervention makes it difficult to establish Reiki's true effect.

2.9.1.3 Effects of Reiki on QOL and sense of well-being

Two studies explored the effects of Reiki in improving QOL (Beard, 2011; Olson, 2003). Beard et al. (2011) looked at the effects of Reiki versus Relaxation Response Therapy (RRT) on QOL in a group of men being treated for prostate cancer ($n = 54$). Participants were scheduled to receive external-beam radiotherapy five days a week for eight to nine weeks. Participants were randomly assigned to receive weekly RRT or Reiki twice weekly (or wait-list control) on the same-day, but before their radiotherapy for up to eight-weeks (maximum of 16 sessions). QOL was measured using the Functional Assessment of Cancer Therapy - General (FACT-G) Scale. The scale comprises of four subscales: physical well-being, social/family well-being, emotional well-being, and functional well-being. No statistically significant effects of Reiki were found on the overall FACT-G scores, however; a significant improvement was detected on the emotional well-being subscale in men who received RRT.

Olson et al. (2003) compared the effects of Reiki on QOL (and pain with analgesic use) using the multidimensional Quality-of-Life measure to establish QOL scores on the physical, social and psychological subscales. The measure was completed on day 1 and again on day 7 (final day of intervention period). The study findings indicated a significant improvement in the psychological component of QOL from day 1 to day 7 in the Reiki group (Arm B) compared to the resting group (Arm A). The authors suggested that an improvement in psychological QOL might have been due to the improvement in pain scores. However, when exploring the possible reasons for these effects, the authors of the study were not able to rule out the effects of placebo effects in this open RCT (Phase II pilot study) where it was not feasible to blind the participants. At the end of this study, the authors were committed to addressing this limitation with plans for a second study using a crossover design with a placebo arm to evaluate the effects of Reiki.

Catlin and Taylor-Ford (2011) demonstrated the positive effects of Reiki on comfort and well-being in outpatients having chemotherapy. Participants receiving chemotherapy ($n = 189$) were

randomised to one of three groups: (i) actual Reiki, (ii) sham Reiki placebo or, (iii) standard care. Measurements on the High-Throughput Quality Control HTQC tool (for comfort) and Well-being Analog Scale (WAS; to measure well-being of cancer patients in relation to therapeutic touch) were taken before-and-after chemotherapy infusion to determine whether the provision of Reiki was associated with improvements in comfort or well-being. The findings indicated clear differences between the two experimental groups and the standard care group. For instance, both the actual Reiki and sham Reiki showed a significant improvement in the before-and-after comfort and mental well-being scores ($p < .05$) using the HTQC and WAS, however, the standard care group did not experience changes denoting an improvement in comfort or well-being ($p > .05$) during their infusion session. Interestingly, the findings of this study show that there were no differences between the actual Reiki and sham Reiki placebo group as both were equally effective in increasing the comfort and well-being in patients having chemotherapy when compared to the standard care group who did not show any change. In line with the inability to rule out a placebo effect in Olson et al's (2003) study discussed previously, the authors were also unable to distinguish if the positive effects in this study were the result of a placebo effect. The authors stated that the improvements in both experimental groups could have been due to participants benefitting from having one-to-one attention from the research nurse and thus, a placebo effect could not be ruled out at the end of this study either.

2.9.1.4 Effects of Reiki on anxiety and depression

Four RCTs assessed the effects of Reiki on anxiety and depression combined (Bowden, 2010; Beard, 2011; Potter, 2007; and Richeson, 2010). The study by Beard et al. (2011) evaluated the effects of Reiki and RRT in a group of men with prostate cancer being treated with radiotherapy however, no significant effects of Reiki specifically were found on: (i) anxiety using the Centre for Epidemiologic Studies Depression Scale (CES-D) and, (ii) on depression using the Spielberger State Anxiety Inventory (STAI). Moreover, no statistically significant differences were found in the overall scores of the CES-D and STAI instruments among the three groups either. An overall reduction in depression scores was found in men who met CES-D criteria for major depression at baseline but these findings were divided evenly among the three groups, and therefore not Reiki-specific. The authors of this study interpret these findings based on their decision to exclude patients with a medical diagnosis of depression (receiving treatment for depression). The STAI scores indicated a significant effect of RRT on anxiety ($p = .02$) whereas a more modest positive trend was found in the Reiki group among men who were anxious at baseline ($p = .0004$).

The findings demonstrated a similar pattern for depression in a study by Potter (2007); a single blind RCT was conducted to assess the feasibility of a Reiki intervention on anxiety and depression in women undergoing breast biopsy. This study tested the feasibility of a Reiki intervention on women ($n = 32$) one-week before-and-after undergoing breast biopsy. Women scheduled for outpatient breast biopsy were randomly assigned to one of two groups: (i) Conventional care with Reiki intervention (experimental), and (ii) conventional care only (control). Three measures were used to assess anxiety and depression: STAI, CES-D and the Hospital, Anxiety and Depression Scale (HADS). Findings suggest that Reiki was ineffective on symptoms of depression change over time, however, the author recognised that the mean depression scores at baseline were below the cut-off score for referral in this group of women. Furthermore, the author addressed limitations of this study by highlighting other studies where levels of distress (depression and anxiety) have been found to be at their highest post-biopsy (e.g. Scott, 1983, as cited in Potter, 2007). Potter's study took measurements one-week pre-and-post biopsy and recognised this as one of its limitations. Though there was a significant reduction in anxiety levels, they were not expressed in crisis proportions and were found to decrease naturally with time. The author concluded similar measurements needed to be taken immediately pre-biopsy and post-biopsy in order to form an accurate understanding of anxiety levels. While these findings could serve to provide a good understanding about testing the feasibility of a Reiki intervention to address the level of distress in women undergoing breast biopsy, it must be noted that the choice to recruit participants using a non-random convenience sampling strategy could give rise to a selection bias, in that: (i) participants are recruited based on their accessibility/ availability/ and willingness to participate, (ii) the sample is not representative of the population and thus demonstrating a lack of generalisability. These findings should, therefore, be interpreted with caution.

Three further studies evaluating the effects of Reiki found Reiki was able to reduce levels of anxiety in participants. Bowden et al. (2010) conducted a study among a group of healthy health psychology undergraduate students to investigate differences in the anxiety and depression scores of the DASS scale in those who received Reiki with those who did not (see section 2.9.1.1 for details about the intervention). The findings indicated a statistically significant improvement between pre-and-post intervention on the DASS scale for anxiety ($p < .05$) but the scores fell short of significance on the depression subscale ($p = .102$) but showed a tendency towards reduced depression. Additionally, Richeson et al. (2010) looked at the effects of Reiki on anxiety and depression (and pain; see section 2.9.1.2 for intervention details) in a group of

community-dwelling older adults. Depression was measured using the Geriatric Depression Scale (GDS-15) and anxiety using the Hamilton Anxiety Rating Scale (HAM-A). Findings after the eight-week intervention period suggest participants who received Reiki showed greater improvement on depression ($p < 0.001$) and anxiety ($p < 0.001$) when compared to those in the wait-list control group. Finally, Shore (2004) looked at the effects of Reiki on symptoms of psychological depression alone (including hopelessness as one characteristic of depression) and found a continuous reduction in depression scores (but not hopelessness) for the Reiki groups but not the placebo control group who exhibited higher scores on depression. The findings indicate Reiki's benefits are sustained up to a year (follow-up data collection time point) despite having no further treatments.

In summary, the mixed findings relating to Reiki's effects on depression certainly require more research to definitively understand whether Reiki is able to provide relief on depression: Beard et al. (2011) found a reduction in depression scores in a group who were diagnosed for major depression at baseline but these findings were not Reiki-specific; Potter (2007) found Reiki to be ineffective in alleviating depressive symptoms; Bowden et al (2010) obtained data that fell short of significance; Richeson et al. (2010) did find significant improvement on depression post-Reiki; and Shore (2004) found the effects were sustained for up to one year since the study was completed. It is difficult to draw conclusions based on these findings alone and more robust studies are needed to understand these effects.

2.9.2 Reiki's effects on physiological outcomes

2.9.2.1 Effects of Reiki on Heart Rate (HR) and Blood Pressure (BP)

Incorporating objective approaches is encouraged when exploring the relatively subjective nature of (i) self-reported psychological variables and, (ii) energy-based therapies (i.e. Reiki) measuring latent variables. As RCTs are considered the gold standard for producing reliable evidence, very little should be left to chance. A number of researchers have advocated the use of physiological measures together with psychological outcomes to reduce subjectivity and to establish an effect that is beyond a placebo effect (e.g. Baldwin, Wagers, & Schwartz, 2008; Olson, 2003). For example, Baldwin et al. (2008) have professed a genuine pain reduction after a Reiki intervention will be associated with a concurrent drop in respiration, HR and BP. Two of the reviewed Reiki studies looked at physiological changes in HR and BP (Olson, 2003; Richeson, 2010).

The first study is by Olson (2003) looking at the effects of Reiki on the level of pain, QOL and analgesic use in cancer patients (see sections 2.9.1.2 and 2.9.1.3 for details about pain and QOL in this study). To provide some context, participants either received standard opioid management plus rest (Arm A) or standard opioid management plus Reiki (Arm B). The authors used HR and BP measurements as an indicator of pain improvement by reasoning that a true decline in participants' perceived pain would be observed as a drop in their diastolic BP and HR (measured through the pulse). The findings demonstrated a significant drop in HR and diastolic BP on day one and four in the Arm B compared to participants in the resting Arm A group indicating an improvement in perceived pain. Although this study does demonstrate effects of Reiki on BP and HR, the purpose of these measurements within the study did not extend as far as a discussion and were therefore understood to be exclusively for the purpose of eliminating the possibility of a placebo effect.

The second study by Richeson et al., (2010) looked at the effects of Reiki on the BP and HR (together with pain, anxiety and depression; see section 2.9.1.2 for details about the intervention) among a group of community-dwelling older adults. This study aimed to evaluate the effects of BP and HR as actual variables. Measurements were taken at three time-intervals: (i) baseline, (ii) before-and-after each Reiki session and, (iii) end of study. The findings showed no significant differences in BP ($p = .45$) and HR ($p = .25$) among the Reiki and wait-list control group, however, the authors had recognised that 85.5% of participants were within the normal range for HR and not considered high-risk for BP at baseline assessment. These findings are in line with a number of other studies not part of this review, that have also demonstrated Reiki's ineffectiveness in reducing BP (e.g. Baldwin, Wagers & Schwartz, 2008; Wardell & Engebretson, 2001).

2.10 NEW RCTs SINCE COMPLETION OF THIS REVIEW

Following completion of the systematic review in 2013, one RCT has been recently published by Alarcão and Fonseca (2016) evaluating the effects of Reiki on QOL of patients with blood cancer. This study was conducted to ascertain whether Reiki was able to alleviate suffering in a group of hospitalised blood cancer patients ($n=100$). Participants were assigned to one of two conditions: (i) true Reiki or (ii) sham Reiki, scheduled twice weekly over a four-week period. QOL was measured using the Portuguese version of the WHOQOL-Bref (World Health Organisations QOL assessment tool) and a shorter version of the WHOQOL-100 assessing impact in four domains: (i) physical, (ii) psychological, (iii) social relations and, (iv) environment. Measures were completed at baseline assessment and after each session. The findings from this study suggest significant improvements in the Reiki group on the physical, social and the environmental domains ($p < .05$) compared to the sham Reiki group. Findings did not reach statistical significance for the psychological domain ($p = .186$) in either group. The authors of this study concluded Reiki as effective for use in patients with blood cancer and advocate its integration into national health services to enable a better QOL in cancer patients. Sixteen participants were lost due to death during the study, however; the authors acknowledge that these patients were recorded as those with the worst diagnosis concerning the stage and type of cancer. Of particular note is that these findings have formed the basis to integrate Reiki into the holistic care pathway at the hospital where the study was conducted.

2.11 CHAPTER CONCLUSION

This chapter presents some relevant and useful evidence demonstrating Reiki's capacity to provide symptomatic relief across a number of psychological and physiological health outcomes. The reviewed studies point toward its efficacy to provide short and long-term respite on a range of health outcomes known to affect patients with cancer. In understanding the evidence from the review, seven RCTs evaluating the effects of Reiki indicated its potential to provide therapeutic relief for seven common variables between studies: anxiety, depression, pain, stress, QOL, HR, and BP. These findings could have important implications for practice; side effects from drug toxicities and treatment complications could be helped as part of an integrated oncology approach to health care however; the relatively small number of methodologically robust studies together with the pilot study status in four of the seven RCTs reviewed, precludes drawing conclusions and further research is warranted.

Finally, it has become clear that much of the criticism of Reiki research focuses on the non-evidence based claims with regards to its effectiveness. Based on scientific logic alone, Reiki's true effects should be measured by ensuring adequate efforts are in place to randomise, control, and blind participants to reduce risk of bias (i.e. placebo). While this holds true in relation to biomedical interventions, measuring Reiki's efficacy against average means and generalisations departs from the notion of the 'whole person' and does not translate Reiki's idiosyncratic benefits that are highly subjective in nature – a fundamental aspect of integrated oncology where Reiki has its place. Furthermore, all the RCTs discussed in this chapter have failed to include the roles of patient expectation, desire, and memory in mediating psychological and physiological outcomes (discussed in chapter one). In sum, Reiki is not a biomedical intervention, and RCTs are limited in their ability to capture individual responses to Reiki (VanderVaart, Gijsen, de Wildt, & Koren, 2009), thus accentuating the need to explore its benefits from a non-biomedical perspective. Straud (2011) argues that evidence is a 'complex construct' that can have varied meanings within different contexts depending on the nature within which the evidence is being studied. One such example is the severity of illness – patients with a severe form of illness might not respond to energy-based therapies such as Reiki in the same way as those with a mild form of illness, or vice versa (e.g. Reiki was advantageous to those who had higher illness symptoms at baseline; Bowden et al., 2010; or diagnosed with major depression at baseline; Beard et al., 2011). Reiki's therapeutic efficacy is therefore largely individualistic and responses to therapy should be understood as a result of individual differences.

The need for a more holistic approach formed much of the basis on which the work done in this Thesis was built on – the findings from this review summon the need to depart from fragmented investigations looking at humans as objects, and more towards an integrated approach that is concerned with obtaining meaningful information about subjective experiences of Reiki. It is very fitting that the most recent study conducted and added to this review advocates its integration into hospital settings based on their findings demonstrating Reiki is able to improve and enhance the holistic vision of care and is suited to palliative care settings.

CHAPTER 3

OVERALL DESIGN AND METHODOLOGY

3.1 CHAPTER INTRODUCTION

Following a review of the findings from the previous chapter, it has been ascertained that Reiki is able to provide benefits at both the psychological and physiological level. The literature review (chapter two) discussed its potential to alleviate symptoms associated with the side effects from cancer and its treatment. It is evident that traditional evaluations of holistic therapies have generally ignored personal experiences for using complementary therapies, over preferences for generalisable reports of an outcome. In order to attain a balance of the reductionist approaches used to study Reiki, an evaluation of CAM therapies should entail an exploration using patients' subjective experiences or feelings, and willingness to recommend as meaningful indicators of perceived effectiveness and/ or satisfaction with Reiki.

This present study was conducted as part of a project plan by the CSC to evaluate their Reiki service as a separate entity from other CAM therapies in their portfolio. It was discussed in chapter 1 that the absence of literature indicating Reiki service evaluations had been conducted within the NHS meant that there was no foundation on which to design this evaluation. The researcher's role in the project, therefore, commenced with plans to address the research gap by firstly, developing a measure to facilitate an evaluation of Reiki. In order to determine what aspects of Reiki therapy are most likely to induce therapeutic relief, preliminary first steps were taken at the CSC towards developing an in-house instrument to elicit self-ratings of perceived effectiveness. This chapter presents the overall methodology from the initial design considerations (i.e. establishing study-specific details, developing the in-house instrument to meet the needs of the CSC, and pretesting it prior to implementation) to the practical aspects of conducting the Reiki evaluation study. In addition, the final section addresses the choice of analytic methods to address the exploratory nature of this research enquiry.

3.2 PRELIMINARY STUDY DESIGN DECISIONS

The CSC required an evaluation of the same-day and longer lasting health benefits conferred through the delivery of Reiki. A number of preliminary study design decisions were made with regards to the provision of Reiki therapy for the purpose of evaluation. A carefully drafted survey plan was used to help focus the project plans (e.g. survey implementation and analysis of research etc.) which consequently helped inform the development of the surveys. These decisions are described separately below.

3.2.1 Establishing the sampling strategy

Participants for this study were recruited based on ease of access, geographical proximity (i.e. located within the hospital), availability, and willingness to participate in the Reiki service evaluation. Non-random sampling comprising factors such as the above are referred to as convenience sampling (Dörnyei, 2007). Wholey, Hatry, and Newcomer (2004) recommend the use of convenience samples when the service evaluation does not involve making inferences about the target population as a whole. In spite of the likelihood of bias and a non-representative sample as a result of the choice of sampling strategy (Mackay & Gass, 2005), it was deemed appropriate for the exploratory nature of this study.

3.2.2 Establishing the sample size

A statistical power analysis does not apply to samples selected by non-random methods (Bowling, 2008). In its place, the intent was to obtain the largest sample available to the CSC.

3.2.3 Establishing the service evaluation timeframe

Data collection was scheduled to run over a minimum of a day (before-and-after Reiki) to a maximum period of five weeks (Time1 and Time2 follow-up). The expected data collection period was estimated to span over a period of twenty-four months.

3.2.4 Establishing the course of therapy

Decisions regarding the number and duration of sessions comprising a Reiki intervention were determined in the absence of available scientific evidence. At the CSC, patients receiving CAM therapies are offered one session lasting up to 40 minutes every week for up to four weeks, however; an additional fifth session was incorporated into the study to enable an evaluation of

the effects of at least four Reiki sessions on outpatients. The researcher was also informed that a course of CAM comprising more than five sessions meant an increased chance that patients would be unwilling to participate or able to attend.

3.2.5 Establishing the measurement time-points

The measurement time points were decided based on where possible changes in patient outcomes were likely to occur. The data collection measurement time-points differed slightly for in and outpatients (a difference in severity of illness means inpatients would not be expected to participate in a five-week Reiki intervention (see [Appendix B](#)).

3.2.6 Establishing the health outcome domains to evaluate

Preliminary plans with the CSC entailed the researcher amassing the broadest range of evidence-based scientific research to identify the range of health outcomes found to benefit from Reiki therapy. The systematic literature review was therefore considered important for facilitating a clearer understanding with regards to the identification of health domains that could be used to inform the item pool during the survey development process. However, despite the researcher's best efforts to complete the systematic review prior to the selection of the health outcome domains for inclusion in the in-house instrument, it was requested that plans to complete the review in full be placed on hold in order to expedite the development of the instrument.

Subsequently, the health outcomes for the in-house Reiki instrument were based on previous efforts at the CSC to develop a study-specific questionnaire to use in an RCT for cancer patients (Young, Westcombe, & Cranshaw, 2000). The study evaluated the effectiveness of Aromatherapy massage and Relaxation therapy (A&R) in reducing anxiety and distress and improving QOL. To provide some context, the aims of the study were to investigate patients' perceptions of the therapies. It was identified that there was a need for a set of questions common to both patient groups, and two further sets of questions, one for each therapy. Issues were drawn from two sources: focus groups and a literature review for each therapy. An 'issue' in this context was problems encountered as a result of having these therapies (e.g. therapeutic crying, emotional release, dislike having oil on hair or face). Issues were compiled individually for both therapies using focus groups. Two checklists were drafted, one for the therapists and the other for the patients. Therapists were asked about the relevance of each issue to their experiences from interactions with patients for each therapy against a 4-point scale (not at all,

a little, quite a bit, very much). The patients' checklists asked each patient about their personal experiences of each therapy against the same 4-point scale. Both groups were asked to choose the eight most important experiences. The aim of this checklist was to collect information on the relevance and importance of each issue individual to each therapy. The aromatherapy list contained 39 issues, and the relaxation list had 38 issues. The two lists were compared and then divided into 3 categories: (i) issues unique to aromatherapy only (total: 22 issues), (ii) issues unique to relaxation only (total: 17 issues), and (iii) common issues to both therapies (total: 21 issues). The issues were then turned into questions (items) and 33 questionnaires were completed (by e.g. relaxation teachers, relaxation patients, aromatherapists, aromatherapy patients) across four different sites.

Five health outcomes (stress, tension, anxiety, calmness and pain) that emerged as important in both the A&R groups were retained for the in-house instrument because the therapists considered they were very relevant to the symptomatic benefits reported by patients after Reiki. Trouble sleeping and mood were not part of the A&R study but were derived from an original version of the Reiki survey used by the on-site hospice within the hospital, and one that the CSC was using prior to the Reiki evaluation to assess patient experiences across all CAM therapies. Although these two outcomes were not listed as a 'common issue' in the A&R study, they were included because the CSC therapists and the CTC ward nurses were in agreement that they were very relevant based on anecdotal reports from patients after Reiki. Patients had previously mentioned a reduction in low mood and sleeping better after Reiki. The questions were developed around these seven health outcome domains for each measurement time point.

3.3 DEVELOPING THE REIKI EVALUATION INSTRUMENT

Two versions of the baseline and same-day follow-up survey were developed with the colour of the survey adapted to the site of recruitment and participant group. The same-day follow-up surveys for the inpatient group were blue (used on the ward), and surveys for the outpatient group were green (used at the CSC). The in-house surveys included questions on seven health outcomes. The first six outcomes were used for the in-and-outpatient groups: (i) anxiety, (ii) tension, (iii) stress, (iv) pain, (v) low mood, and (vi) calmness. As mentioned previously, it was not possible to follow-up inpatients over a longer time period due to their severity of illness. As Reiki's benefits on 'trouble sleeping' were expected to develop over a longer time frame than a day, 'trouble sleeping' was incorporated as the seventh health outcome, evaluated over the five-week Reiki intervention in outpatients only.

3.3.1 Baseline and same-day survey (in and outpatient groups)

The baseline measure (called Q1: see [Appendix C](#)) was developed to collect patient reported health outcomes before Reiki. The first section (questions 1 - 3) comprised general questions about feelings before Reiki (e.g. whether they felt apprehensive or whether they thought Reiki will be helpful to them). A question on ‘trouble sleeping’ was included at baseline to establish whether Reiki was able to produce beneficial changes in outpatients as part of the longer-term follow-up. The second section (questions 4 - 9) required patients to use a 10-point numerical scale to evaluate feelings on six outcomes, specifically, pain, tension, calmness, anxiety, stress, and low mood. The second page of the survey was the same-day follow-up (called Q2: see [Appendix D](#)) to be completed after Reiki (immediately after for outpatients, but later in the day for the inpatients to accommodate ward activities). Patients were asked to report feelings on the same six outcomes as Q1. ‘Trouble sleeping’ was excluded as it was not possible to measure same-day improvements.

3.3.2 Follow-up survey (Time and Time2) (outpatient group only)

The longer-term follow-up survey (called Q3: see [Appendix E](#)) was for the first and second follow-up time points at week two (Time1) and week five (Time2). The two-repeat follow-up time-points were to explore any change in health outcomes since baseline, and to evaluate the incremental benefits from Reiki over time, e.g. whether Reiki helped improve sleep by week two or week five (Did Reiki help you to sleep? If so, how long did this feeling last?).

3.3.3 Exit survey (outpatient group only)

The exit survey (called Q4: see [Appendix F](#)) asked patients about their overall experience of Reiki therapy following their last visit. The first section asked patients to recall physical sensations and emotions experienced during their five-week Reiki intervention. The second section asked for additional feedback concerning Reiki and the service they received at CSC, e.g. “Would you recommend Reiki to others?” and the likelihood for patients to continue Reiki in the future, e.g. “Are you likely to seek any more Reiki sessions elsewhere?” In addition, participants were asked to share feedback about the CSC service, e.g. “Please share any additional comments”

3.4 PRETESTING THE REIKI EVALUATION INSTRUMENT

Given the complexity of the survey implementation process (four surveys over five sessions), it was highly unlikely that the first draft of the instrument was perfect in capturing all the required data, without the possibilities of response and measurement error. Evidence also suggests that there is likelihood for misinterpreting questions by the respondent (other than in the way that the researcher may have intended for them to have been understood), especially surrounding questions on health status (Tanur, 1992), hence the importance of checking for misunderstandings and inconsistent interpretations (Collins, 2003). It was therefore highly probable that pretesting the different versions of the instrument in its developmental phase could highlight problems, including clarity of questions, missing questions, response categories etc.

3.4.1 Cognitive interviewing

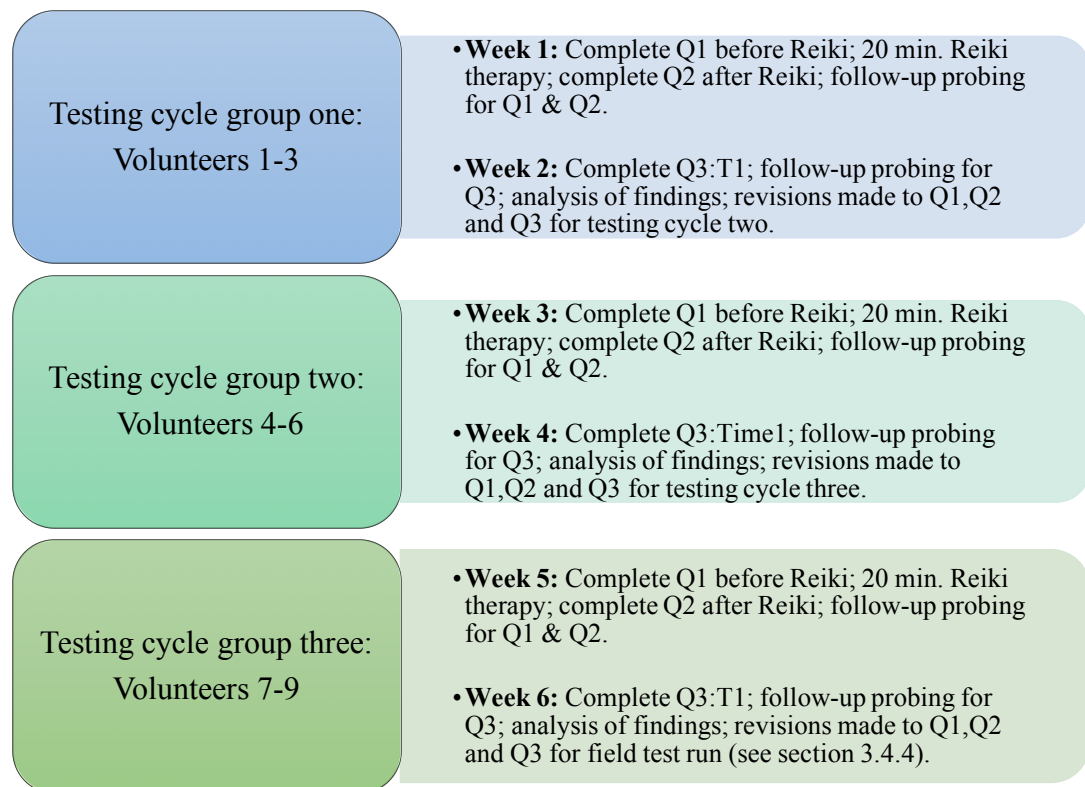
Retrospective Verbal Probing (RVP) is a recommended method of Cognitive Interviewing (CI) in health survey pretesting that involves asking the respondent a series of questions (general to very specific) to gather information on probable signs of misinterpretation or difficulty, associated with completing the survey (Willis, 2015). The method for conducting probing retrospectively (as opposed to concurrently) is advantageous when attempting to simulate a “realistic” type of presentation (Willis, 2015) and when the intention is to avoid interference with the context of the survey completion itself (DeMaio, Rothgeb, & Hess, 1998). It has also been suggested that probing afterwards can be useful when the purpose is to pre-test self-completion surveys (as opposed to interviewer-administered surveys) when attempting to understand the respondent’s ability to complete the instrument unassisted (Willis, 2015).

The instrument’s effectiveness was evaluated using RVP to meet two objectives: (i) to establish whether the surveys met their intended measurement purpose (i.e. to ensure the surveys were designed to yield reliable, unbiased and complete data), (ii) to compare improvements in data quality as part of the experimental phase (i.e. during testing cycles) making lateral revisions to each version of the survey where necessary.

3.4.2 The pretesting process

Nine volunteers at the CSC were asked if they would participate in the pre-testing phase assisting with the development of a new in-house instrument for an upcoming service evaluation at the CSC. The recruited testing group were targeted individuals with specific characteristics of interest, e.g. those with no prior knowledge of Reiki but had some prior familiarity with holistic therapies. Figure 6 shows the overall pretesting process incorporating the three testing cycles comprising of (i) the total number of times that the instrument was administered to each group and the subsequent follow-up probing; (ii) the process of eliciting information during the follow-up probing interview; (iii) the necessary revisions made subsequently, and (iv) testing the adequacy of the revisions in the next cycle of testing.

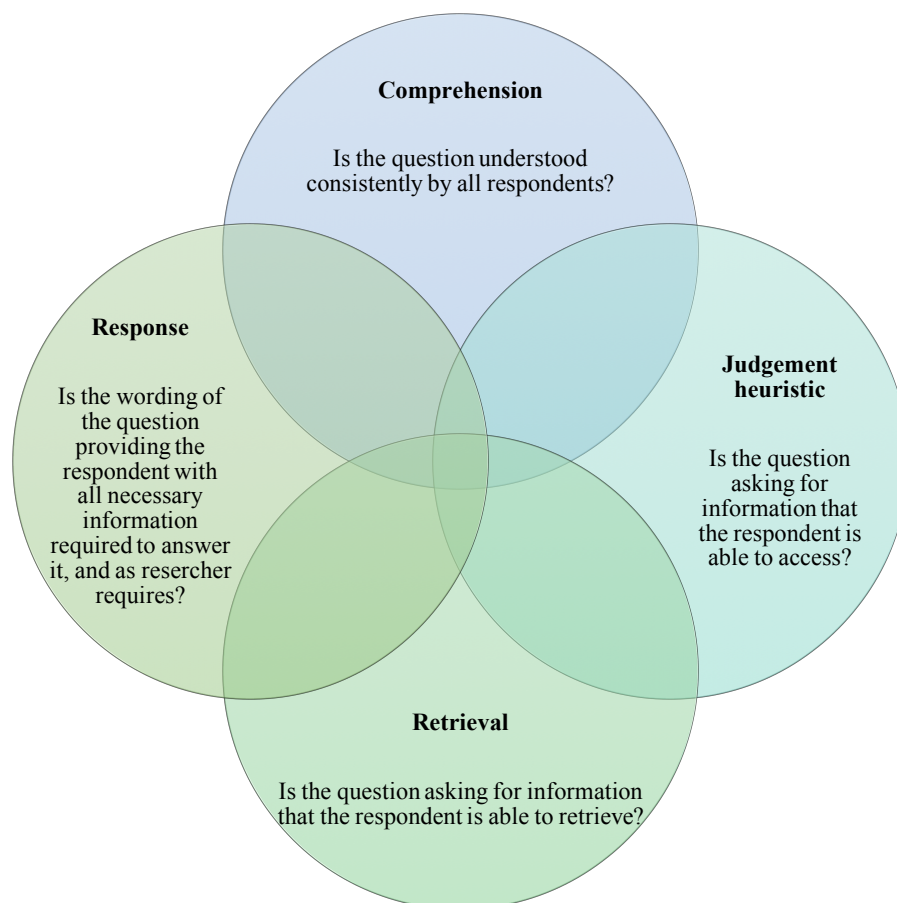
Figure 6: A flow diagram showing the survey pretesting process



The volunteers were given a twenty-minute Reiki session so that the process simulated actual plans for the service evaluation as closely as possible. Volunteers were given Q1 and Q2 surveys to complete before-and-after their Reiki session on week one, and Q3 survey on week two. RVP was used to follow-up once the respondents had completed their survey on both weeks.

Due to a lack of a framework to analyse and interpret the interviews, it can become relatively complicated to construct valid meaning from the narrative data. Tourangeau (1984) recommends the use of four taxonomies to understand the complete question-and-answer process during CI (Figure 7): (i) comprehension, (ii) retrieval, (iii) judgement, and (iv) response. This framework was employed as the scientific standard to test the assumptions shown in Figure 7 below. A combination of scripted and spontaneous probing types (i.e. scripted protocols to probe respondents using Tourangeau's framework were generated and adapted during each interview based on the respondent's answer) was considered an effective method for pretesting the surveys (e.g. Willis, 2015).

Figure 7: Tourangeau's (1984) cognitive model of survey response



The findings obtained from both interviews served a different purpose. The objective of the first interview in each testing cycle was to establish Q1 and Q2's capacity to gather baseline and same-day data. This was achieved by identifying possible misunderstandings based on

respondents' interpretation of instructions, understanding of questions and terminology, ensuring no discrepancies existed between the respondents' understanding and the researcher's intended meaning. An example of a 'comprehension/ interpretation probe' used during the first interview was "what does the term tension mean to you?". The objective of the second interview in each testing cycle was to establish Q3's effectiveness as a follow-up survey. This was achieved by asking a series of recall and general probing questions aimed at understanding the respondents' ability and reliability to retrieve information from memory recall since the previous week, and their ability to map internally generated responses using the pre-specified 'time-referent' response categories on the survey. An example of a 'recall probe' used in the second interview was "how do you remember that Reiki helped you with your pain for up to a few days?". An example of a general probe asked in the same interview was "was that easy or hard to remember?".

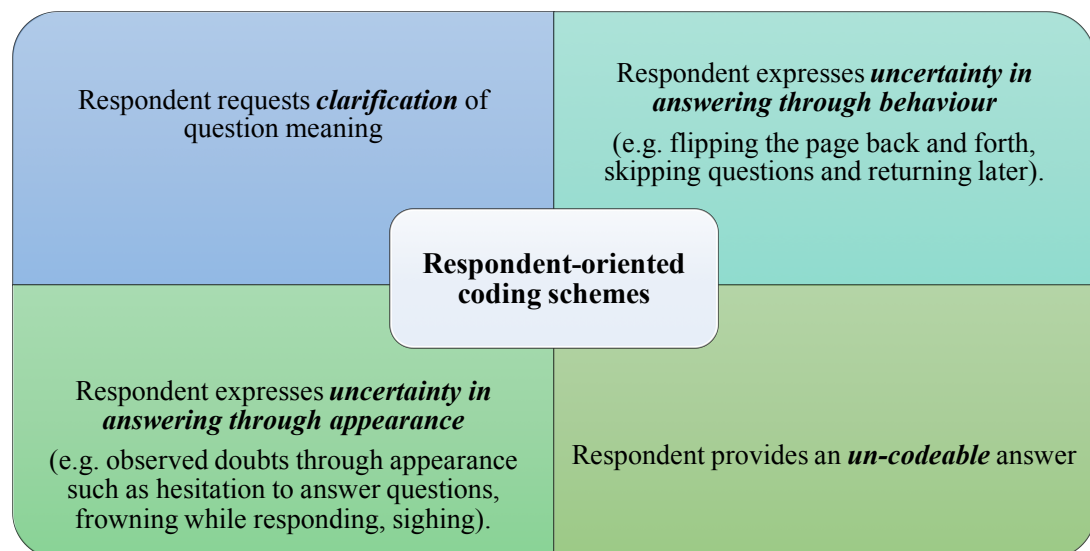
3.4.3 Analysis of interviews

A numerical approach of counting instances of 'problem areas' from the nine cognitive interviews were used to identify particular areas/ items that proved challenging for respondents. If the verbal probing revealed probable signs of misunderstanding, misinterpretation or other difficulties (e.g. inconsistent interpretations of words or concepts, and reliability of information retrieved from memory recall), then this was identified as a problem area for revision before the next round of testing (Presser et al., 2004). Problem areas or "common strands" (Abeyasekera, n.d.) were identified as repetitive problems occurring frequently over the course of six weeks. It was expected that extracting, counting and combining the common strands to form smaller 'themes' to summarise data in numerical form (frequencies of common areas) could help draw meaning from the textual findings, thus, making the qualitative analyses more coherent in order to make the relevant revisions before the next testing cycle. The objective was that each round of testing completed would identify new unanticipated problems in addition to revising existing problems. Measurement and respondent errors were modified for several weeks based on the problems identified from the RVP interviews using the four taxonomies from Tourangau's (1984) question-and-answer framework. The testing cycles continued until there was sufficient confidence that no further changes were necessary; the third version of the in-house instrument was finalised as the definitive version before the Reiki service evaluation.

3.4.4 Small-scale feasibility test run

The definitive set of surveys were tested further as part of field test run with the first ten patients recruited onto the Reiki evaluation study in order to determine its usability in the target population (i.e. cancer patients recruited onto the Reiki evaluation study). Furthermore, Wholey et al., (2004) argue that even if health outcome domains are based on previous surveys from other studies (as was the case in this study), they should still be tested on the target group to ensure that questions are clear and respondents are able to understand what is expected. Participants were observed using structured observation. Therapists used a pre-specified respondent oriented coding scheme shown in Figure 8 below to observe and compile problem frequencies where patients were expressing concerning behaviours when completing the surveys. Additionally, the data collected were entered into a Microsoft Excel (2000) spreadsheet to ensure that the dataset was complete and the researcher was able to code the responses/ analyse the frequency data. No problems were identified for the first ten participants and the in-house instrument was continued for the remainder of the service evaluation study based on successfully having met the objectives.

Figure 8: Criterion for basic codes used to study patient behaviour



Adapted from Willis (2015).

3.5 CONDUCTING THE REIKI EVALUATION STUDY

3.5.1 Ethical approval

The study did not require review for ethical approval because it was not considered ‘research’ according to the NHS Health Research Authority (HRA) for three reasons as follows (see [Appendix G](#)): (i) Participants in the study were not randomised, (ii) The study did not require making changes to standard treatment regimes, and (iii) The findings were expected to produce outcomes that were only of interest to the CSC in regards to their Reiki service and thus, not considered generalisable to the broader patient population. Further clarity was sought by discussing the aims and processes of the study with the NHS HRA to ascertain a level of certainty with regards to ethics (see [Appendix H](#)). Additional communication with the research manager at the CSC (see [Appendix I](#)) and the local Research and Development team confirmed their agreement that the conditions under which the Reiki evaluation was being conducted were satisfactory, and this was deemed as the approval needed to commence data collection. Institutional ethical approval had been sought and approved retrospectively, by the Research Ethics Committee at Queen Margaret University (see [Appendix J](#)). This study was conducted in compliance with the Good Clinical Practice (2016) guidelines and the BPS Code of Ethics and Conduct (2009).

3.5.2 Study design

This exploratory service evaluation study was conducted using an uncontrolled before-and-after (same-day follow-up) design with a group of in and outpatients. Two additional time-points followed to evaluate the longer lasting therapeutic benefits of Reiki therapy over the course of a five-week Reiki intervention in outpatients.

The researcher recognises that uncontrolled before-and-after studies are not held with the same regard as controlled before-and-after studies due to their tendency to inflate positive treatment effects (Chalmers, Celano, Sacks, & Smith, 1983; Goodacre, 2015; Lipsey & Wilson, 1993;). However, a review of studies by Benson and Hartz (2000) found no evidence suggesting estimates of treatment effects in observational studies were consistently larger than, or different from, treatment effects obtained from RCTs. It was felt that this was the correct choice and appropriate course of action to explore an area where there is an absence of existing data. As the data were obtained using an in-house instrument developed for the purpose of the service evaluation at the CSC, the data were not considered generalisable and the evaluation and the

exploratory nature of the study meant these were preliminary steps taken to explore the possibilities for future research. In addition, the study was designed to meet the available resources and the researcher had little control over the delivery of the Reiki intervention. An uncontrolled before-and-after study has been suggested as an acceptable design where the researcher has to place an evaluation around a proposed intervention (Eccles, Grimshaw, Campbell, & Ramsay, 2003).

3.5.3 Setting

The research for this service evaluation study was conducted at the CSC and included the CTC wards at the hospital as part of the proposed study plans. The CSC is an information and support centre that works closely with the NHS to facilitate a holistic pathway by providing an integrative oncology approach (i.e. complementary therapies) to patients receiving treatment for cancer at the specialised CTC, located within the hospital.

3.5.4 Participants

Convenience samples of patients receiving cancer treatment at the CTC and/ or attending the CSC for information and support were invited to take part in the Reiki evaluation study.

Patients admitted to the CTC wards as inpatients are generally considered more severely ill (i.e. suffering from more aggressive cancer types) and therefore provision of treatment is concerned with close monitoring and providing relief to alleviate symptoms and improve QOL deterioration as a result of their cancer, surgery, or post-surgical treatment, as part of their specialist palliative/ ambulatory care. On the other hand, overnight hospital stays are not required for outpatients who are usually day referrals at the CTC for consultation or treatment. Their healthier QOL (e.g. due to less aggressive cancers) compared to that of inpatients enables outpatients to resume a more active life by returning home/ work in between treatment cycles. It was therefore of particular importance that patients were recruited from both groups to enable a comparison between patients with differing severity of illness. Additionally, as the evaluation was a preliminary step to assess whether Reiki therapy was beneficial to patients/ inform future research plans, this study attempted to understand the practicality of conducting Reiki research including, an assessment of the feasibility of recruiting from both patient groups.

A ward nurse was responsible for eligibility-screening the inpatients before referring them to the study. Eighty-one inpatients were scheduled to receive Reiki therapy on the ward from a

Reiki therapist from the CSC as part of a same-day follow-up (to accommodate the ward activities). Forty outpatients attending a drop-in appointment at the CSC were eligibility-screened by the therapists prior to recruitment. Participants were informed that the study was a project evaluating the effectiveness of Reiki therapy on health outcomes. Outpatients were informed that their participation would require completing a set of questionnaires about their experiences of having Reiki over the course of a five-week intervention.

3.5.5 Procedure

3.5.5.1 Patient consent, eligibility screening, and recruitment

Procedures for obtaining consent differed for in and outpatients. The ward nurse completed a ward referral form (see [Appendix K](#)) on behalf of patients outlining the patients' details, medical histories, and the reasons for referral, which was accepted as informed consent. Outpatients were self-referred and on a conversation with a therapist/ volunteer at the CSC, were provided with an information sheet about Reiki therapy (see [Appendix L](#)). Participants were asked whether they would like to participate in the Reiki service evaluation study but informed that it was entirely their decision with no implication on their entitlement to receive future support from the CSC. Prospective participants were screened for eligibility by the therapist before receiving Reiki on their baseline and first therapy visits. If patients were considered eligible and were willing to participate, their informed consent was obtained (see [Appendix M](#)) and patients were requested to complete the health profile questionnaire (see [Appendix N](#)).

3.5.5.2 Implementation strategy

The researcher developed a workflow checklist (see [Appendix O](#)) for the Reiki therapists making sure there was a system in place ensuring order and timely handling of all the paperwork. Survey packs were created and distributed in advance to the CSC prior to participant recruitment.

3.5.5.3 Data collection time-points

3.5.5.3.1 Inpatients

Baseline measures were taken prior to delivering Reiki and a same-day measure was administered later in the day to compare before-and-after changes on six health outcomes

(except ‘trouble sleeping’ as it was not possible to collect data on same-day improvements). A total of two surveys were administered (Q1 and Q2 comprising of one completed set).

3.5.5.3.2 Outpatients

Baseline measures were taken prior to the first session of Reiki. A same-day measure was administered immediately after the first session to compare before-and-after changes across six health outcomes, except ‘trouble sleeping’ (baseline responses were taken for follow-up comparisons). In order to evaluate the longer lasting effects for one Reiki session, the first follow-up measure was administered before Reiki on the second visit (Time1). Patients received only Reiki on sessions three and four. In order to evaluate the cumulative effects of Reiki over the course of the intervention, another follow-up measure was administered before Reiki on the fifth visit (Time2). Patients completed an exit survey after their fifth and final Reiki session. A total of four surveys were administered across five time-points (Q1, Q2, Q3:T1, Q3:T2 and Q4 comprising of one completed set).

3.5.5.4 Patient anonymity

It was not possible to blind the Reiki therapists who administered the surveys before-and-after therapy, however, it was agreed that Reiki therapists should remain unaware of participant responses. As the researcher handling all the data worked remotely from the research office in a separate building and did not have any interaction with participants, it was agreed that all surveys were sealed and returned in a pre-addressed envelope to the researcher. Participants were instructed to place the sealed envelopes into the labelled drop box by the exit on their way out. The drop box was emptied once a day by the research team. Anonymity was protected by ensuring that participant names were extracted and recorded on a separate document stored on a password protected Trust computer in the research office. Each participant was given an individual identifier for the rest of the data entry and analysis.

3.5.5.5 Patient confidentiality

The surveys were completed in the therapy room where Reiki was administered, and completed in the absence of the therapist. All data were handled in accordance with the UK Data Protection Act (1998) in that protection of personal data was maintained, kept confidential and managed according to the Trust requirements. Information entered into the computer for data analysis was stored on a password-protected Trust computer. Hard copies of patient surveys were stored

within secured storage facilities within the research team office, where the researcher was based.

3.5.6 Exploratory data analysis

As randomisation had not been possible for this exploratory study, a series of data analyses were carried out to establish whether there were significant changes in health outcomes across different time-points over the course of a five-week Reiki intervention period. Systematic differences were observed for the group of participants at baseline assessment, same-day follow-up, and at Time1 and Time2 follow-up. Table 1 (p. 64) summarises the type of analysis conducted depending on the type of data collected at different time points for different health outcomes.

A Wilcoxon signed-rank test was used as a non-parametric alternative to compare the differences between the before-and-after scores taken at baseline assessment, and at same-day follow-up. The Wilcoxon test was used to gauge immediate benefit conferred through the delivery of Reiki on six psychological health outcomes ('trouble sleeping' was excluded as it was not possible to collect data on same-day improvements for sleeping problems, but this was analysed at the two follow-up time-points for outpatients).

The incremental effects of Reiki for outpatients, by end of the course of therapy, were evaluated using frequency analyses to compare the follow-up at Time1 (week 2) and Time2 (week 5) data. As the follow-up at Time2 measure was administered prior to the participant receiving Reiki on the fifth session, the longer lasting effects of Reiki for all health outcomes (including trouble sleeping) evaluated the preceding four sessions only.

Further analyses were conducted on the follow-up data for outpatients using Spearman Rank Correlation Coefficient analyses to explore relationships among participants' baseline feelings of apprehension about having Reiki the first time, and their perceptions of its effectiveness across the seven health outcomes at the Time1 and Time2 follow-up visits. A Spearman Rank Correlation Coefficient analysis between Reiki's perceived helpfulness at baseline with its perceived effectiveness at the subsequent follow-up visits was also conducted to explore relationships between the baseline and follow-up data. In addition, Spearman rank correlation coefficient analyses were performed to measure correlations among the seven health outcomes

at both follow-up visits to determine whether there was an association between groups of health outcome variables.

Table 1: Data analysis plan

	Wilcoxon Signed Rank Test		Frequency Data Analyses		Spearman's Correlation Coefficient		
Type of comparison	Comparison of differences		Comparison of frequencies and percentages		Correlations between baseline and follow-up data		
Objective	To explore same-day effects		To explore longer lasting effects		To explore whether baseline feelings of apprehension about having Reiki and its perceived helpfulness affected symptomatic improvement at follow-up		
Patient group	Inpatients and outpatients		Outpatients		Outpatients		
In-house instrument survey	Baseline (Q1)	Immediately after (Q2)	Time1 follow-up (Q3:T1)	Time2 follow-up (Q3:T2)	Baseline (Q1)	Time1 follow-up (Q3:T1)	Time2 follow-up (Q3:T2)
Health outcome domain							
Apprehensiveness					X	X	X
Helpfulness					X	X	X
Trouble sleeping			X	X	X	X	X
Pain	X	X	X	X	X	X	X
Tension	X	X	X	X	X	X	X
Calmness	X	X	X	X	X	X	X
Anxiety	X	X	X	X	X	X	X
Stress	X	X	X	X	X	X	X
Low mood	X	X	X	X	X	X	X

3.6 CHAPTER CONCLUSION

In the absence of existing evidence (i.e. identifiable literature from similar NHS hospital-based Reiki evaluations within the UK or existing tools to measure the effects of Reiki) that could demonstrate what an effective Reiki evaluation should or could entail, decisions taken were often the result of practical considerations, based on availability of resources, or best judgement based on previous experiences of conducting research at the CSC. These decisions were, therefore, deemed as an appropriate course of action and in line with the exploratory nature of this study.

This chapter has presented the reader with an overview of the methodology concerning design-related decisions undertaken before commencing with the Reiki service evaluation. The chapter has drawn on the methods of developing and pretesting the Reiki in-house instrument to facilitate data collection to meet the needs of the CSC, as described above. An overview of the practical aspects of conducting the service evaluation has been provided, by detailing the procedure used to collect the same-day and same-day follow-up data using the in-house instrument. This chapter ended with a synopsis of the selected statistical analyses that are used to analyse the data yielded by the in-house instrument. The next chapter outlines the specific details about handling the quantitative data and provides a rationale for the chosen statistical methodology illustrated in Table 1 (p.64).

CHAPTER 4

RESULTS I: STATISTICAL METHODS AND HANDLING DATA

4.1 CHAPTER INTRODUCTION

This chapter considers the rationale for the statistical methods used to handle the quantitative data collected using the in-house instrument. The method of handling missing data together with the rationale for the selected statistical test will also be discussed.

Guidelines on conducting uncontrolled studies advise that findings are interpreted with caution (e.g. Grimshaw, Campbell, Eccles, & Steen, 2000; Goodacre, 2015). As this was an exploratory study, the analytic approach relied primarily on exploring patterns in the data to understand patient experiences of Reiki therapy. In line with this purpose, there was no intention to infer causality or draw conclusions about the target population but merely to use the data to identify whether a definitive investigation was warranted in the future.

4.2 PREPARING THE RAW DATA FILE

As completed ‘survey packs’ were returned to the researcher, raw data were transferred into (i) SPSS (Statistical Package for the Social Sciences, Version 22) for analysing demographic, baseline assessment and same-day follow-up data, and (ii) Microsoft Excel, 2011 was used to analyse follow-up at Time1 and Time2 data.

4.2.1 Predictor and outcome variables

As a general rule of thumb, variables within experimental studies are either causing the effect or are affected by the cause. The former is termed the independent variable, and the latter is termed the dependent variable. In the context of this study, the researcher endeavoured to explore the therapeutic effects of Reiki on six dependent variables (health outcomes). However; it is important to note that Reiki as the cause and independent variable was not subjected to manipulation (e.g. through varying the number of sessions or dose) during the course of the five-week intervention. As no variables were manipulated in this study design, the terms ‘predictor variable’ (independent) and ‘outcome variable’ (dependent) have been suggested as better representations (Field, 2013). In this sense, the predictor is thought to affect the change, and the effect is simply an outcome. Accordingly, the researcher had adhered to reporting findings in this format.

4.2.1.1 Apprehensiveness and helpfulness as predictor variables

The baseline assessment (Q1) was designed to collect ordinal-level data on feelings of apprehension about having Reiki the first time to establish whether such feelings had an impact on perceived outcome effects. In addition, baseline data was requested to ascertain whether participants thought Reiki would be helpful. This data was expected to constitute an exploration of relationships between expectation and outcome effects (i.e. as measured through Reiki’s perceived effectiveness on each health outcome variable, at the Time1 and Time2 follow-ups). Feelings about apprehensiveness and helpfulness concerning Reiki’s therapeutic efficacy were considered a useful measure of treatment beliefs about perceived effects on seven health outcomes.

4.2.1.2 Health domains as outcome variables

Both, the Q1 baseline assessment and the same-day follow-up assessment (Q2) were designed to collect numerical ratings of patients’ feelings on six outcome variables. A simple Visual

Analogue Scale (VAS) used in the surveys which required respondents to rate their feelings before-and-after Reiki in six domains (pain, tension, calm, anxiety, stress, mood), by circling a number between 0 and 10. A value of 0 conveyed feeling the ‘best’ and 10 conveyed feeling the ‘worst’. While the scale remained the same, the labels were reversed for the ‘calmness’ domain; the value of 0 represented feeling ‘very calm’ and 10 conveyed feeling ‘not calm’.

The longer-term follow-up survey (Q3) was administered at week two (Time1 follow-up) and week five (Time2 follow-up). Pre-assigned categories used to quantify incremental changes on health outcomes since the previous Reiki session used: (i) a five-point Likert scale to rate improvement (i.e. not at all, a little, quite a bit, very much, can’t remember), and (ii) a four-point Likert scale using time-referent categories to rate duration of improvement (i.e. rest of the day, a few days, up to 1 week, can’t remember).

4.3 HANDLING MISSING DATA

A large volume of data was collected from the inpatient and outpatient groups and some returned surveys were identified to have missing responses at the time of transferring the data into SPSS. Moreover, there were incidents of entire follow-up surveys missing for the outpatient group. By observing patterns in the data, it was apparent that some outpatients only completed baseline and same-day follow-up while others completed baseline, same-day follow-up and an additional Time1 follow-up. Subsequently, a Time2 survey was missing for the latter group.

Similarly, returned surveys from the inpatient group were also found to have responses missing from questionnaire items, or the whole survey on the second page not completed. It was important to be able to distinguish between the two different types of missing data incidents when transferring data into SPSS. The next section discusses the methods used to handle missing item responses and entire missing units.

4.3.1 Coding item non-responses with ‘88’

A value of ‘88’ was assigned to missing responses on particular items (termed ‘item non-response’). The extent of the item non-response problem for baseline and same-day follow-up data was larger in the inpatient than outpatient group; there is some evidence suggesting an increase in tendency for non-responses in larger samples (Agresti & Finlay, 1997), and that it is more common when respondents are recruited from elderly clinical populations (Rockwood

et al., 1989, as cited in Bowling, 2008) however research in this areas is inconsistent (e.g. Cartwright & Windsor, 1989; as cited in Bowling, 2008). Item non-response has also been suggested to indicate a negative reaction of the respondent (Loosveldt, Pickery, & Billiet, 2002). The data were carefully examined on SPSS to establish those item responses were missing at random (Fayers, Aaronson, Bjordal, Groenwold, Curran, & Bottomley, 2001). As there are no explicit methods for establishing reasons for missing responses, it seems more sensible to assume item responses were missed completely at random (Bowling, 2008; Fayers et al. 2001). The study-specific surveys were considered to be of a non-invasive nature and did not ask sensitive or personal questions (see [Appendix I](#)). Taking this into consideration as reasons for possible non-compliance (e.g. Fayers et al., 2001), together with the absence of an identified pattern (see Table 2; p. 71), it was possible to conclude that same-day follow-up data were probably missing at random. On the other hand, item non-responses with the same-day follow-up data remained open to the possibility that there could be some degree of problem with memory recall as questions required additional comprehension and thought.

Methods of handling missing data are well documented (Bowling, 2008; Fayers et al., 2001; Billingham, Abrams, & Jones, 1999). One method is to impute the missing value by calculating the average score from the number of completed items (Agresti & Finlay, 1997; Bowling, 2008; Fayers et al., 2001). A prerequisite to calculating the mean using this approach, however, is that more than, or equal to half of the items, should have been answered (e.g. 5 out of 10). It is usually applied in situations where a number of items make up a single scale. In the context of this study, each outcome was measured with just a single item, so it was difficult to establish which means to use to impute the missing scores from two different approaches: (i) consider the respondent's mean (the sum of the respondent's scores across all different outcomes, divided by the total number of scored items) or, (ii) consider the group mean from all participants (the sum of all respondents' scores for the particular outcome, divided by the total number of completed responses by all respondents for that outcome). Having liaised with the centre's research manager on the best way to proceed, it was agreed that there is no obvious rationale to impute missing data. Under these circumstances, and in line with the exploratory nature of this service evaluation study, the decision was taken by the researcher to present all data in its original non-imputed format.

4.3.2 Coding unit non-responses with ‘99’

A value of ‘99’ was assigned to intermittent missing whole surveys possibly due to the participants having dropped out of the study (termed ‘unit non-response’). The researcher has not disregarded the possibility that surveys might have merely been misplaced and lost, as there were no explicit arrangements to prevent unreturned surveys.

As previously mentioned, it was decided to refrain from utilising imputation techniques to assist with missing data and thus, it was agreed based on recommendation with the centre’s research manager, to exclude all respondents with missing units from subsequent analyses (Bowling, 2008). In doing so, the researcher was able to recognise participant attrition on sample size (Yan & Curtin, 2010) in both groups, however, in line with the exploratory nature of this study (i.e. not statistically powered), excluding respondent’s due to missing unit non-response was not considered to pose a great threat in regards to the scientific integrity (e.g. selection bias) of the overall study.

4.3.2.1 Analysis of inpatient group lost to follow-up

In total, 75 of the 81 participants in the inpatient group completed the baseline and same-day follow-up surveys. It was not possible to compare before-and-after scores for participants who did not complete the same-day follow-up measure ($n = 6$); plans were in place to exclude them from further analyses (herein called the ‘excluded group’). Participants with missing units were compared with those with no missing units to ensure no significant differences existed before they were excluded. Table 2 (p. 71) presents the characteristics based on information taken from the medical assessment form on six outcomes.

Table 2: Descriptive statistics and baseline frequencies for the excluded group

		Inpatient excluded group (n=6)						Total N
Gender	Cancer	Pain	Tension	Calm	Anxiety	Stress	Mood	
Female (n=4)	Bladder	2	2	2	Missing	4	4	
	Oesophagus	0	Missing	3	5	0	3	
	Thymoma	5	8	0	0	0	0	
	Unknown	4	5	4	4	3	2	
Male (n=2)	Renal cell	6	6	4	6	6	5	
	Unknown	8	7	7	7	6	5	
Ratings of 0		1	0	1	1	2	1	6
Ratings of 1-3		1	1	2	1	1	2	8
Ratings of 4-6		3	2	2	1	3	3	14
Ratings of 7-9		1	2	1	1	0	0	5
Ratings of 10		0	0	0	1	0	0	1
Minimum		0	2	0	0	0	0	
Maximum		8	8	7	7	6	5	
Range		8	6	7	7	6	5	
Mean		4.17	5.60	3.33	4.40	3.17	3.17	

The score ranges (generated from the minimum and maximum scores across all six outcome variables), for participants in this group show that the majority of participants rated their symptoms between 4-6 (n = 14) on the numerical rating scale, followed by ratings between 1-3 (n=8), and then 0 (n = 6). Few participants rated their feelings as 10 (n = 1). Table 3 (p. 72) shows the participant characteristics of the included group. These data enabled a comparison of the excluded group against the included group data to ensure that no significant differences existed.

Table 3: Descriptive statistics and baseline frequencies for the included group

Inpatient included group (n=75)							
	Pain	Tension	Calm	Anxiety	Stress	Mood	Total N
N	73	74	71	73	74	74	
Missing	2	1	4	2	1	1	11
Ratings of 0	23	7	9	13	9	17	78
Ratings of 1-3	20	20	20	19	23	20	122
Ratings of 4-6	16	21	22	16	18	23	116
Ratings of 7-9	11	18	13	19	17	9	87
Ratings of 10	3	8	7	6	7	5	36
Minimum	0	0	0	0	0	0	
Maximum	10	10	10	10	10	10	
Range	10	10	10	10	10	10	
Mean	3.12	5.01	4.54	4.58	4.57	3.65	

Table 3 above shows that the minimum and maximum ranges of scores for the included participants range from 0 (feeling the best) to 10 (feeling the worst) across all outcome variables. Observation of the frequencies of ratings across all outcome variables indicates that the majority of the participants rated their symptoms between 1-3 (n = 122), followed by between 4-6 (n = 116). A few participants rated their symptoms as 10 (n = 36).

The frequencies of ratings (i.e. the number of times participants rated a specific score for each outcome variable) in the excluded group was compared with frequencies from the included group. A comparison of these data was to help establish that no significant differences existed among this group (e.g. in relation to severity of illness as measured through higher outcome ratings etc.) before excluding the incomplete dataset from further analyses. A comparison of the minimum and maximum values of the excluded group with the included group showed, in fact, that the ratings on health outcomes for the excluded group ranged between 5-8; with rating scores for this group being lower than the score range of 0-10 for each variable, for the included group. As the majority of participants in both groups rated their scores between 1-6, and as no further differences were observed (other than the obvious dissimilarity in the group size: included: n = 75; excluded n = 6), the six participants were confidently removed from further analysis.

4.3.2.2 Analysis of outpatient group lost to follow-up

Eleven of the 40 outpatient participants did not complete the full five-week Reiki intervention. The methods of handling losses at follow-up for this group differed due to the longer time frame over which participants were evaluated. The study procedure for this group required participants to complete a baseline assessment and same-day follow-up (same as inpatient group) however, in addition, the group completed a longer-term follow-up at week two (Time1) and week five (Time2). Table 4 below shows that participants had dropped out at one of two time-points.

Table 4: Summary of participant dropout rates

Time points assessed	n at baseline	n at Time1	Total n who completed Time1 and Time2	Analysis based on data available
Baseline assessment (before Reiki) and Same-day follow-up (after Reiki)	40			Wilcoxon signed rank test for before and after analyses on n=40
Did not return for Time1 follow-up	4			
Follow-up at Time1 (week 2)		36		
Did not return for Time2 follow-up		11		n = 11 excluded from final analyses
Follow-up at Time2 (week 5)			25*	n = 25 evaluated for same-day effects

* The total number of participants used for before-and-after analyses

Table 4 above shows that a total of 15 participants dropped out. Specifically, participants either (i) completed baseline and same-day assessment, (ii) completed baseline, same-day and follow-up at Time1, or (iii) completed all assessments (including Time2 follow-up). The 4 participants who did not return for Time1 follow-up were not excluded from the baseline and same-day analyses because it was still possible to compare before and after differences in this group.

For the 36 participants who completed Time1 follow-up, it was not possible to run frequency analyses on 11 participants because they dropped out after Time1. This group was excluded, as

Time1 data were not useful in the absence of Time2 data. Baseline characteristics and frequency data for the outpatient group were explored (same method as inpatient group) to ensure no significant differences existed in participants who did not complete the study, with those who did.

4.3.3 Final screening and cleaning the scored data

As outliers can distort statistical analyses (Pallant, 2001), an inspection of the dataset for both groups, using frequencies and descriptives, ensured out-of-range values were identified and corrected prior to establishing appropriate methods of statistical analysis.

4.4 ESTABLISHING THE APPROPRIATE STATISTICAL METHODS

The researcher is not a statistician. For this reason, regular consultations with the centre's research manager and the university statistician took place to ensure data analyses were conducted correctly. Following on from these consultations, statistical analyses were performed based on the most appropriate way to handle the various forms of self-report data collected in this study (e.g. ordinal data at baseline and same-day follow-up; nominal data at same-day follow-up). These methods are discussed in sections 4.4.1 and 4.4.2 below.

4.4.1 Baseline and same-day follow-up data

4.4.1.1 Determining a statistical model to fit the data

Researchers in the field of health statistics (e.g. Jamieson, 2004; Knapp, 1990) have highlighted the significance of addressing what level of measurement is in use during the early stages of research design. In the context of this study, participants were asked to rate their feelings using a 10-point numerical scale to identify their perceptions of change on six health outcomes before-and-after Reiki. Thus, the data were considered ordinal. The use of medians as a measure of central tendency has been recommended where data are ordinal (Clegg, 1998). In addition, Cohen, Manion, and Morrison (2000) advise the use of inferential statistics for ordinal-level data that employ non-parametric tests. In line with this, the Wilcoxon signed rank test was established as an appropriate test for comparing differences (encompassing a comparison of medians) in the before-and-after scores. Descriptive statistics were explored by generating box plots to demonstrate median and inter-quartile (I-Q) ranges, and additional descriptives to explore variables included minimum and maximum values, and the range.

4.4.1.2 Calculating and reporting effect sizes for non-parametric statistics

While the p -value alone is not an indicator of the actual strength of the relationship between two variables, the inclusion of a measure of effect size to follow-up statistically significant statistics has been suggested to permit a better understanding of the effect of one variable on another (e.g. Leech & Onwuegbuzie, 2002; Tomczak & Tomczak, 2014). In doing so, the researcher provides the reader with sufficient information to assess the strength of the relationship of the observed effect, alongside their statistical significance.

While it is a regular practice to report effect sizes for parametric findings, it is no less appropriate to do so for statistically significant non-parametric results (Leech & Onwuegbuzie, 2002; Tomczak & Tomczak, 2014). In accordance with Field's recommendation for reporting non-parametric statistics, effect sizes have been reported for the Wilcoxon Signed Rank Test for Paired Samples with the z -statistic, the exact significance value, medians, and their corresponding ranges (Field, 2013; p. 235). Z -scores were used to calculate effect sizes by employing the recommended formula below (e.g. Field, 2013; Tomczak & Tomczak, 2014), where n is the total number of observations on which the Z -score is based:

$$r = \frac{Z}{\sqrt{n}}$$

The interpretation of the calculated r -value corresponds with to the interpretation of the r -value for Pearson's correlation coefficient (Tomczak & Tomczak, 2014). Therefore, the Pearson correlation coefficient size of effect conventions followed to understand the magnitude of the observed effect is in line with the widely used conventions about what constitutes a small/medium/large effect (e.g. Cohen, 1988, as cited in Field, 2009, p. 57; Pallant, 2010, p. 134). In accordance with Cohen's (1988, 1992) guidelines, the effect sizes used in this Thesis are as follows: small ($r = .1$), medium ($r = .3$), and large ($r = .5$).

4.4.2 Longer-term follow-up data

4.4.2.1 Determining methods of analysis for T1 and T2 follow-up data

The longer-term follow-up surveys were designed to collect nominal data at two time points (Time1 and Time2) in the outpatient group. These surveys were designed to collect ratings on seven health outcomes (including trouble sleeping). Participants rated changes since their previous visit; each response category denoted a progressive change than the preceding category. Field (2013) advocates the ‘only’ method by which nominal data should be considered is by exploring frequencies. In line with this suggestion, methods encompassing descriptive and frequency data (e.g. graphs) were considered appropriate to explore patterns in rates of improvements and duration of improvement between the two time-points.

Spearman’s (rho) correlations were used to explore statistical dependence between the ranking of baseline, Time1 and Time2 data sets. Correlation analyses conducted enabled a comparison of the baseline ratings of apprehensiveness about having Reiki and Reiki’s perceived helpfulness with ratings of perceived effectiveness at Time1 and Time2. Additional Spearman’s correlations were conducted to explore the shared beneficial relationship on one health outcome with a second outcome to ameliorate symptoms after Reiki, for both follow-up time-points.

4.5 CHAPTER CONCLUSION

This chapter has presented the methods used to handle the missing data collected using the in-house instrument. The rationale for the statistical methods adopted has also been outlined, including the reporting of effect sizes for non-parametric statistics. The findings from conducting the statistical and non-statistical analyses are presented in the next chapter.

CHAPTER 5

RESULTS II: EXPLORING STUDY DATA

5.1 CHAPTER INTRODUCTION

This chapter explores the data using the methods discussed in chapter four. The chapter starts by presenting the demographic data followed by an exploration of the data for six health outcomes assessed at the baseline and same-day follow-up. Data will be presented separately for the in-and-outpatient groups. The data collected from the longer-term follow-up surveys, including ‘trouble sleeping’ as the seventh health outcome domain, over a five-week period from the outpatient group will be explored also. Frequencies will be presented separately for each of the seven health outcomes to facilitate an independent exploration of data from each participant and domain. Relationships will also be examined between feelings of apprehension about having Reiki at baseline with perceived therapeutic effectiveness on health outcomes at follow-up. In addition, the data for Reiki’s perceived helpfulness will be explored to determine whether expectations for Reiki to provide relief are correlated with the seven health outcomes.

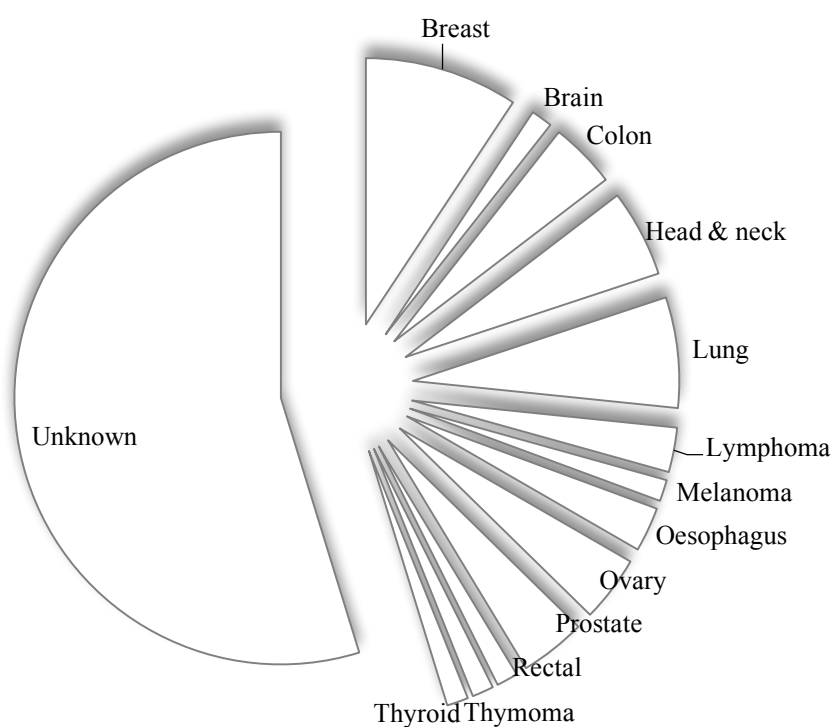
5.2 DEMOGRAPHIC DATA

5.2.1 Inpatient group

Eighty-one participants comprising of 26 males (32.1%) and 53 females (65.4%) were recruited onto the Reiki service evaluation study. Gender data were missing for two participants (2.5%). Six participants had not completed the same-day follow-up survey and were omitted from further before-and-after analyses. Other medical demographic data such as age, cancer diagnoses (i.e. whether primary or secondary cancer), treatment details, and other comorbid health conditions/ allergies were not recorded for this group as patients were referred for Reiki by the ward nurse and medical data were recorded upon hospital admission.

Figure 9 below presents the summary data of the baseline information for participants who completed both the before-and-after Reiki surveys. The pie chart does not include data for the six participants who did not complete the same-day follow-up survey. The divided portion labelled as 'unknown' represents missing detail about the location of cancer from the participants or ward nurse.

Figure 9: Summary of variation by cancer site in inpatient group

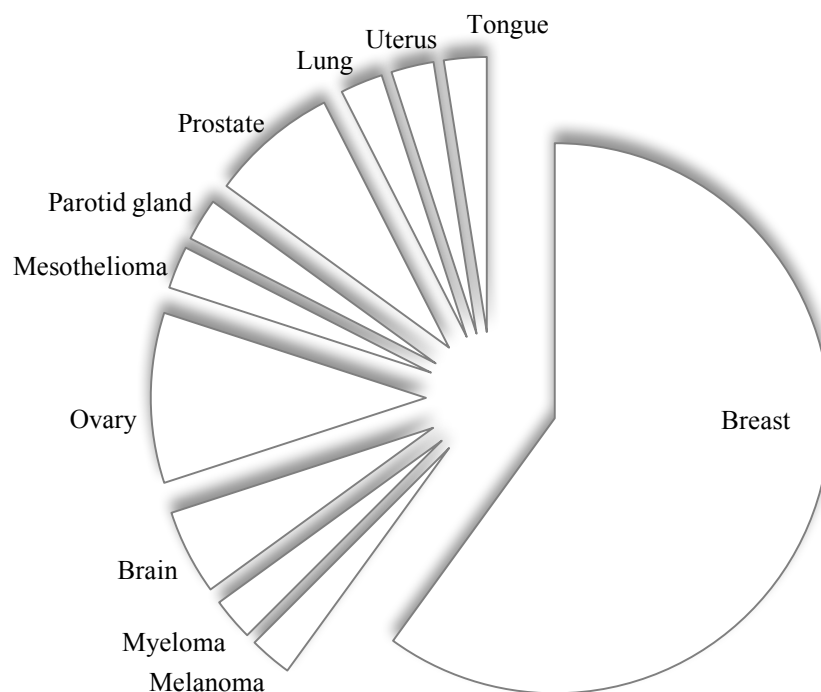


5.2.2 Outpatient group

Forty participants comprising of seven males (17.5%) and thirty-three females (82.5%) were included in the baseline and same-day follow-up analyses. Age (years) was categorised into brackets: 30-35 (2.5%), 41-45 (5%), 46-50 (22.5%), 51-55 (15%), 56-60 (17.5%), 61-65 (15%), 66-70 (7.5%), 71-75 (7.5%), and 76-80 (2.5%). Age data were missing for two participants (5%). The mean age was 57 years. Eleven participants who were previously included in the initial analyses (same-day follow-up) (see Table 4, p. 73), were later omitted from longer-term follow-up analyses due to missing data.

All participants (100%) had a primary cancer diagnosis (Figure 10 below). Participants with a secondary diagnosis represented 17.5% of the total sample. Treatment among the sample (n = 40) included: chemotherapy (70%); radiotherapy (72.5%); clinical trial (12.5%); and operation (92.5%).

Figure 10: Summary of variation by cancer site in outpatient group



Participants indicated other health conditions including: allergies (40%); asthma (12.5%); diabetes (10%); deep vein thrombosis (2.5%); epilepsy (5%); hypertension (20%); hypotension (10%); skin conditions (20%); and varicose veins (5%). Participants also provided medication information: antiemetic drugs (2.5%); analgesics (12.5%); laxatives (2.5%); steroids (10%); antibiotics (10%); anti-inflammatory (5%); and hormone replacement therapy (15%).

5.3 EXPLORING THE INPATIENT GROUP DATA

5.3.1 Exploring baseline and same-day follow-up

5.3.1.1 Descriptive statistics

The objective of analysing baseline and same-day follow-up data was to explore if there is a significant before-and-after change in pain levels, tension, calmness, stress, and low mood in the inpatient group. As the Wilcoxon Signed rank test is testing differences between ranks, medians are considered as better representations of non-parametric testing of central tendency compared with parametric tests that test differences in means (Field & Hole, 2002). An analysis of the descriptive data (Table 5) below shows a reduction in the medians, suggesting that patients felt some symptomatic improvement after Reiki. It can also be seen that the before-and-after scores led to a significant overall difference for the six outcomes ($p < .001$). Box plot diagrams were generated to demonstrate what the Wilcoxon Signed rank test data were representing (i.e. medians, I-Q ranges; Field & Hole, 2002).

Table 5: Descriptive data for inpatient group (n = 75)

	Pain		Tension		Calmness		Anxiety		Stress		Low mood	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Median	2.00	1.00	5.00	2.00	4.00	1.00	4.00	1.00	4.00	1.00	3.50	2.00
Minimum	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	10	10	10	9	10	9	10	10	10	10	10	10
Range	10	10	10	9	10	9	10	10	10	10	10	10
I-Q range	6	5	4	5	4	3	6	3	5	3	4	5

It is interesting to examine the descriptive data in Table 5 for patterns using boxplot diagrams. Looking at the cases more closely using a boxplot helps to see the extent to which particular cases (outliers) differed from the majority of the group. The grey box indicates the range

between which 50% of the data falls (upper and lower quartile comprising the inter-quartile range). For instance, the data in Table 5 shows that the minimum score was 0 and the maximum score was 10 for calmness before Reiki. Figure 11 (below) demonstrates that 50% scored between 3 and 7 on calmness. It can also be seen that the grey box has lined up with the lower quartile after Reiki suggesting that 50% of participants felt calmer (scores between 0 and 3) after Reiki compared to before Reiki (scores between 3 and 7).

The red line illustrates the median and it can be seen that the medians for calmness, anxiety and stress before Reiki are higher than the medians after Reiki, suggesting that the median score for each outcome was higher before Reiki (i.e. was less calm, more anxious or more stressed) than the median score after Reiki. This is also the case for anxiety (Figure 12; p. 82) and stress (Figure 13; p. 82). The post-Reiki boxplots for pain, tension, and low mood also demonstrate a positive skew after Reiki suggesting an improvement following Reiki. These can be located in the Appendices (see [Appendix P](#)).

Figure 11: Boxplots comparing calmness distributions before and after Reiki

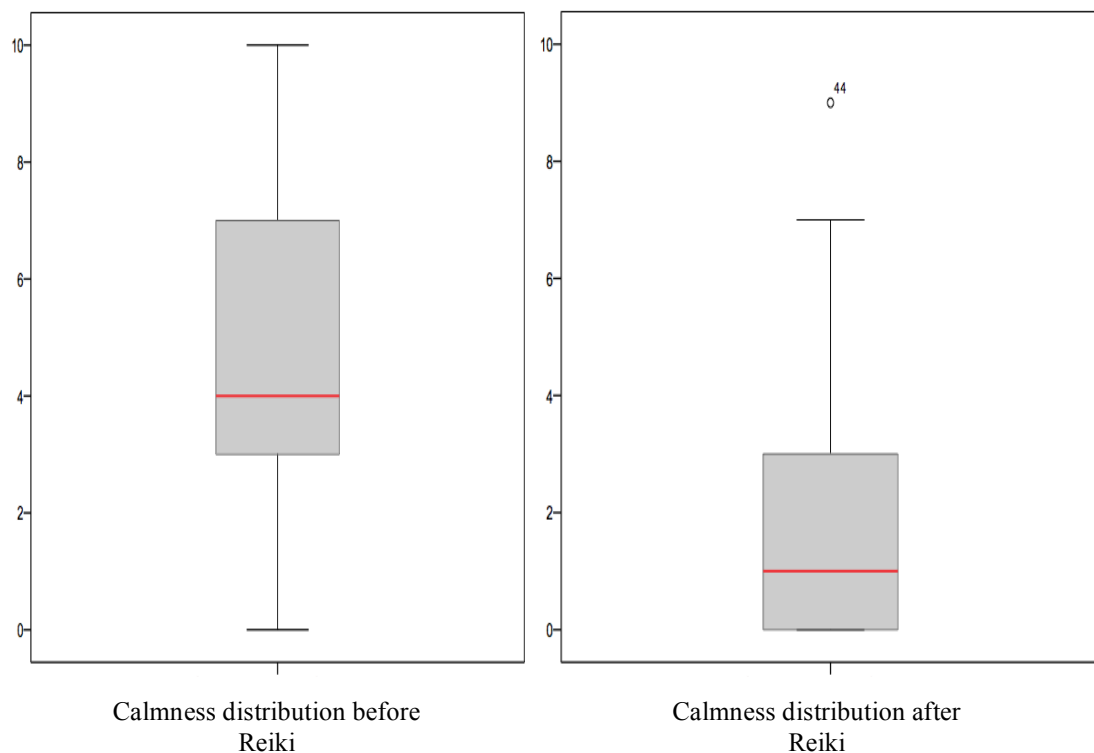


Figure 12: Boxplots comparing anxiety distributions before and after Reiki

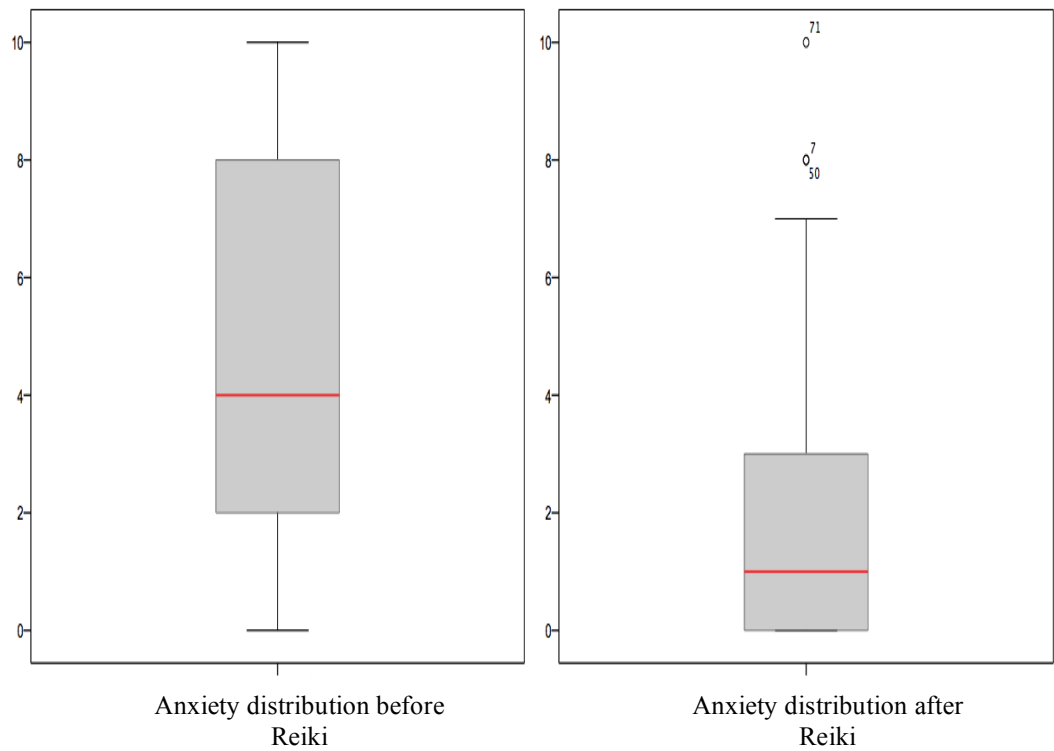
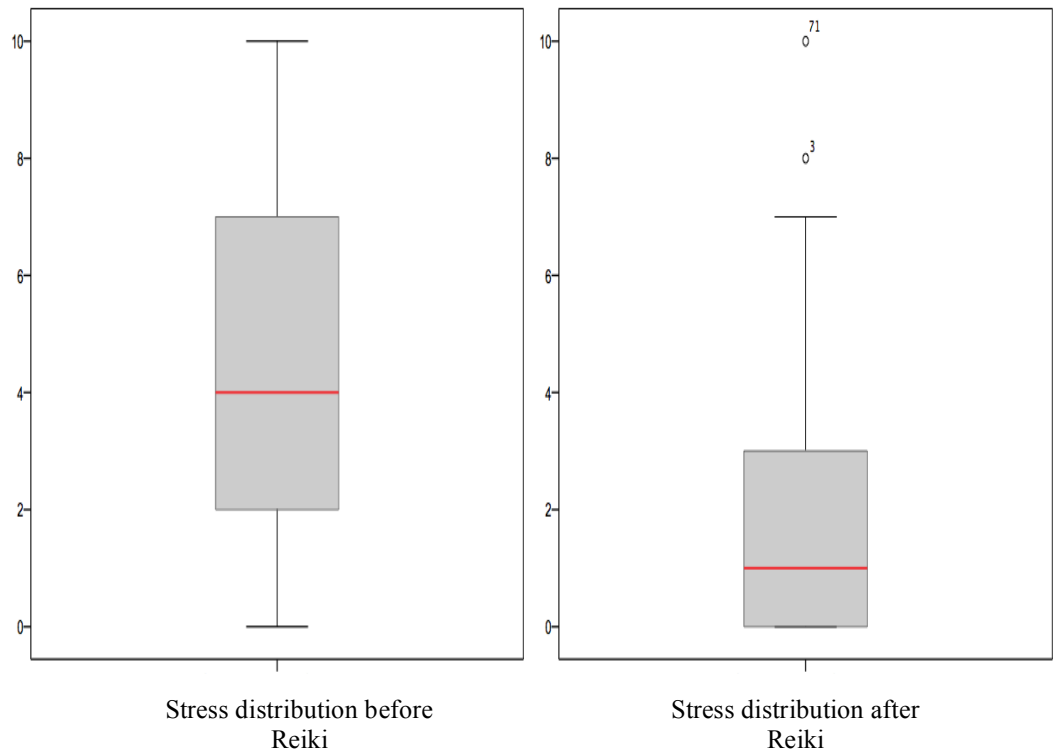


Figure 13: Boxplots comparing stress distributions before and after Reiki



5.3.1.2 Inferential statistics

The Wilcoxon Signed-rank test was used to explore differences in the before-and-after Reiki scores in the inpatient group on pain, tension, calmness, anxiety, stress, and low mood (Table 6).

Table 6: Inferential statistics for inpatient group

	Overall Significance			
	2-tailed Sig. (<i>p</i>)	<i>z</i> *	<i>n</i>	<i>r</i> **
Pain	.000	-3.91*	73	.32
Tension	.000	-5.71*	72	.47
Calmness	.000	-5.75*	70	.48
Anxiety	.000	-5.66*	71	.47
Stress	.000	-6.08*	73	.50
Low mood	.008	-2.66*	74	.21

**z*- scores based on positive ranks;

**Effect sizes based on Pearson's-*r*: Small .1; Medium .3; Large .5.

An analysis of the inferential data in Table 6 shows that the difference between before Reiki (baseline assessment) and after Reiki (same-day follow-up) scores was statistically significant ($p < .001$). The Wilcoxon Signed-rank test analyses show:

- Pain scores were significantly higher before Reiki ($Mdn = 2.00$) than after Reiki ($Mdn = 1.00$), $z = -3.91$, $p < .001$, $r = .32$.
- Tension scores were significantly higher before Reiki ($Mdn = 5.00$) than after Reiki ($Mdn = 2.00$), $z = -5.71$, $p < .001$, $r = .47$.
- Calmness scores were significantly lower before Reiki (observed as a higher 'not-calm' score; $Mdn = 4.00$) than after Reiki ($Mdn = 1.00$), $z = -5.75$, $p < .001$, $r = .48$.
- Anxiety scores were significantly higher before Reiki ($Mdn = 4.00$) than after Reiki ($Mdn = 1.00$), $z = -5.66$, $p < .001$, $r = .47$.
- Stress scores were significantly higher before Reiki ($Mdn = 4.00$) than after Reiki ($Mdn = 1.00$), $z = -6.08$, $p < .001$, $r = .50$.
- Low mood scores were significantly higher before Reiki ($Mdn = 3.50$) than after Reiki ($Mdn = 2.00$), $z = -2.66$, $p < .001$, $r = .21$.

The Wilcoxon Ranks table below (Table 7) provides some interesting data on the comparison of before-and-after scores on six health outcomes. The negative, positive and tied ranks denote the following:

- (i) The negative ranks indicate the number of participants who scored higher at baseline assessment.
- (ii) The positive ranks indicate the number of participants who scored higher in the same-day follow-up.
- (iii) The ties indicate the number of participants that felt no change before or after their first Reiki therapy session.

Table 7: Wilcoxon Signed Ranks for the before-and-after inpatient group data

	Negative ranks (After < Before)	Positive ranks (After > Before)	Ties (After = Before)	Total n
Pain	29	8	36	73
Tension	58	8	6	72
Calmness	50	9	11	70
Anxiety	52	7	12	71
Stress	53	8	12	73
Low mood	34	13	27	74
Total n	276	53	104	433

It can be seen from the negative ranks column that the majority of participants had scored higher symptoms on all six outcomes at their baseline assessment than same-day follow-up suggesting an improvement following Reiki. The positive ranks column indicates that 53 responses suggested participants felt poorer after Reiki, at the same-day follow-up. The ties column indicates the number of participants who felt no change in their symptoms before and after Reiki. It can be seen that Reiki was able to provide some symptomatic relief on tension for participants more than calmness, anxiety, stress, low mood, and especially pain.

5.4 EXPLORING THE OUTPATIENT GROUP DATA

5.4.1 Exploring baseline and same-day follow-up

5.4.1.1 Descriptive statistics

An analysis of the descriptive data (Table 8) below shows a reduction in the median scores, suggesting beneficial changes following Reiki in the outpatient group. Specifically, the data indicate that the median score for each health outcome was higher before Reiki (i.e. felt more pain, tension, anxiety, stress, low mood and less calm) than the median score after Reiki. The boxplots can be found in the Appendices (see [Appendix Q](#))

Table 8: Descriptive data for outpatient group (n = 40)

	Pain		Tension		Calmness		Anxiety		Stress		Low mood	
	Before	After	Before	After	Before	After	Before	After	Before	After	Before	After
Median	3.00	.00	5.00	1.00	4.00	.00	4.50	.50	5.00	1.00	5.00	.50
Minimum	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	7	6	8	5	9	5	9	3	10	4	10	8
Range	7	6	8	5	9	5	9	3	10	4	10	8
Inter-quartile range	4	2	3	2	4	2	3	2	4	2	4	2

5.4.1.2 Inferential statistics

Table 9: Inferential statistics for outpatient group

Overall significance				
	2-tailed Sig. (<i>p</i>)	<i>z</i> *	<i>n</i>	<i>r</i> **
Pain	.000	-3.96*	40	.44
Tension	.000	-5.32*	40	.59
Calmness	.000	-5.27*	40	.58
Anxiety	.000	-5.19*	40	.58
Stress	.000	-5.10*	40	.57
Low mood	.008	-5.05*	40	.56

**z*- scores based on positive ranks;

**Effect sizes based on Pearson's-*r*: Small .1; Medium .3; Large .5.

An analysis of the inferential data (Table 9) shows that the difference between before Reiki (baseline assessment) and after Reiki (same-day follow-up) scores was statistically significant ($p < .001$) for the outpatient group. The Wilcoxon Signed-rank test analyses show:

- Pain scores were significantly higher before Reiki ($Mdn = 3.00$) than after Reiki ($Mdn = .00$), $z = -3.96$, $p < .001$, $r = .44$.
- Tension scores were significantly higher before Reiki ($Mdn = 5.00$) than after Reiki ($Mdn = 1.00$), $z = -5.32$, $p < .001$, $r = .59$.
- Calmness scores were significantly lower before Reiki (observed as a higher 'not-calm' score; $Mdn = 4.00$) than after Reiki ($Mdn = 1.00$), $z = -5.27$, $p < .001$, $r = .58$.
- Anxiety scores were significantly higher before Reiki ($Mdn = 4.50$) than after Reiki ($Mdn = .50$), $z = -5.19$, $p < .001$, $r = .58$.
- Stress scores were significantly higher before Reiki ($Mdn = 5.00$) than after Reiki ($Mdn = 1.00$), $z = -5.01$, $p < .001$, $r = .57$.
- Low mood scores were significantly higher before Reiki ($Mdn = 5.00$) than after Reiki ($Mdn = .50$), $z = -5.05$, $p < .001$, $r = .56$.

The findings from the Wilcoxon Ranks analyses presented in the table below (Table 10; p. 87) show the comparison between before-and-after scores on six health outcomes. It can be seen

from the negative ranks column that the majority of participants had scored higher on all six outcomes at their baseline assessment than same-day follow-up. The positive ranks column indicates that 32 responses suggested participants felt poorer after Reiki, at the same-day follow-up. The ties column indicates the number of participants who felt Reiki was able to provide some symptomatic improvement on tension, calmness, anxiety, stress and low mood. However, it can be seen that 17 participants felt no change in pain symptoms before and after Reiki.

Table 10: Wilcoxon Signed Ranks for the before-and-after outpatient group data

	Negative ranks (After < Before)	Positive ranks (After > Before)	Ties (After = Before)	Total n
Pain	21	2	17	40
Tension	37	2	1	40
Calmness	36	1	3	40
Anxiety	34	2	4	40
Stress	34	2	4	40
Low mood	33	4	3	40
Total n	195	13	32	240

5.4.2 Exploring the longer-term follow-up data

The next section presents the outpatient group data for seven health outcomes from the Time1 and Time2 follow-up visits. Scores were compared for the seven health outcomes across week two and five, with a view to evaluating whether the benefits of Reiki were sustained over the course of the five-week intervention. As discussed in chapter four, although unit non-responses were excluded, there were some item non-responses; please note, in the interest of drawing meaningful interpretation from the graphs, item non-responses, ‘can’t remember’ responses, and responses where participants stated they were not experiencing a health outcome before Reiki (i.e. not at all/ or very much for calmness) have been excluded. All data excluded in this instance can be located in the Appendices where the complete dataset for both Time1 and Time2 follow-up visits can be found for all participants (see [Appendix R](#)). Correlation analyses have been conducted to investigate the relation between apprehensiveness about having Reiki for the first time at baseline with perceived effectiveness of Reiki on health outcomes at the

subsequent follow-up visits. Baseline perception of Reiki's helpfulness is also investigated using correlations with perceived effectiveness at follow-up.

5.4.2.1 Descriptive statistics

5.4.2.1.1 Exploring experiences of health outcome symptoms at T1 and T2

Figures 14 and 15 below present the summary of reported outcomes measured at weeks two and five. Participants were asked whether they were experiencing symptoms on seven health outcomes before Reiki therapy last time, at their Time1 and Time2 follow-up visit. The data in Figures 14 and 15 below illustrate findings for the first follow-up and second follow-up visits respectively.

Figure 14: Reported experiences of health outcomes before Reiki at T1

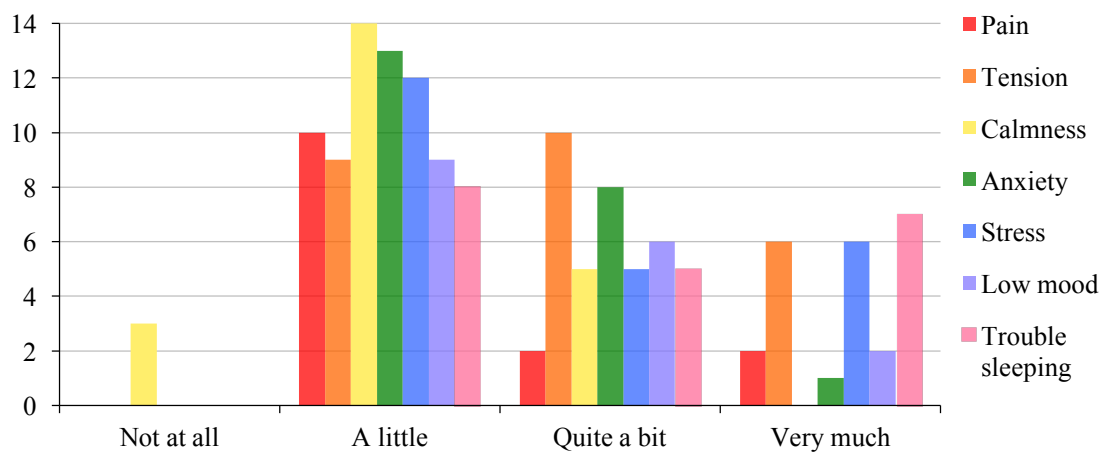
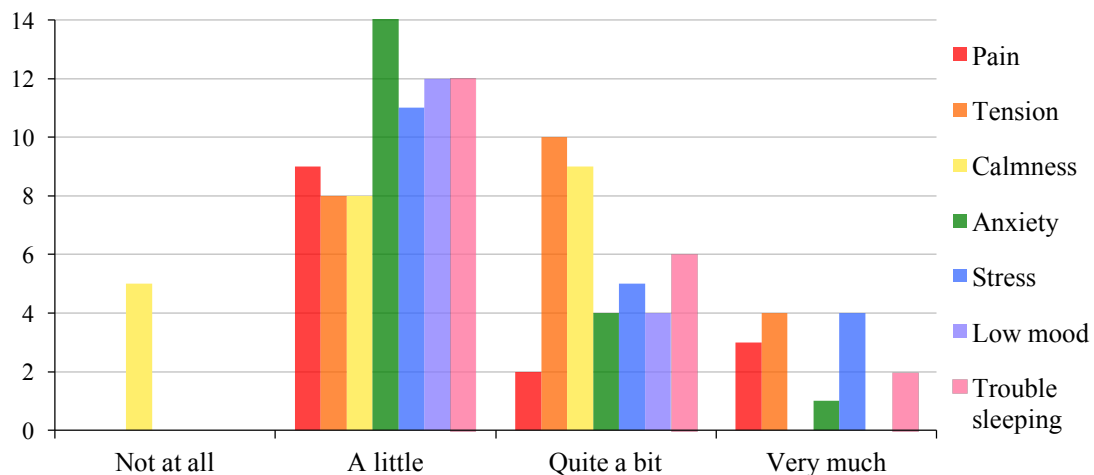


Figure 15: Reported experiences of health outcomes before Reiki at T2



5.4.2.1.2 Exploring symptomatic improvement at T1 and T2 intervals

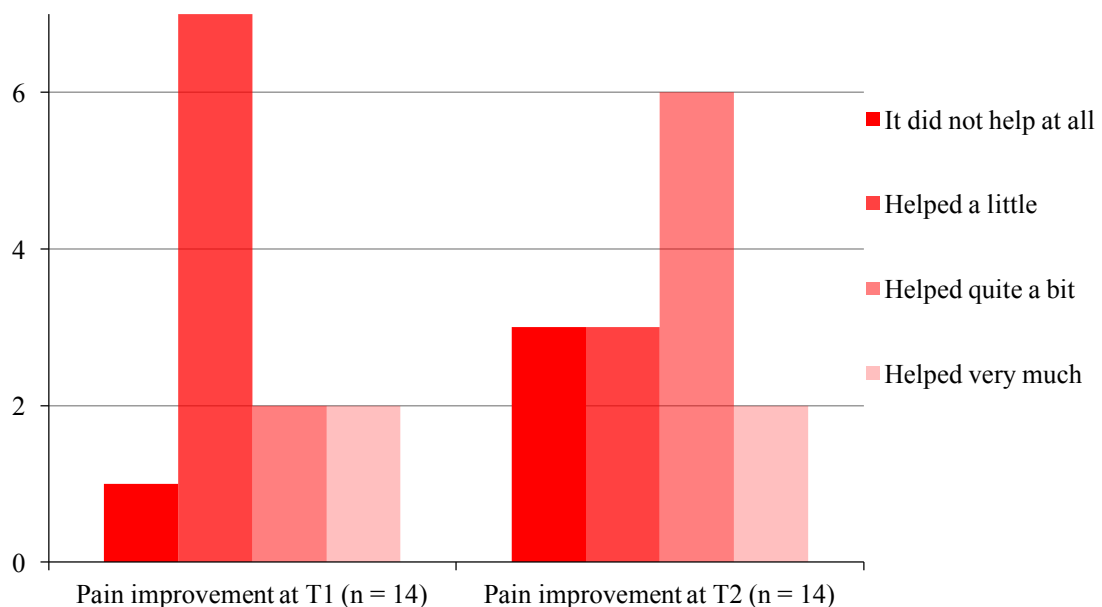
Figures 16 to 22 present the summary of reported outcomes measured at weeks two and five. Participants were asked whether they were experiencing each health outcome before Reiki and if so, whether Reiki helped provide symptomatic improvement.

Pain

Participants who reported experiencing pain before Reiki therapy last time were asked whether Reiki helped with their pain. The data in Figure 16 below show that 11 of the 14 participants who reported experiencing some pain (i.e. a little, quite a bit, very much; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped improve their pain: a little ($n = 7$; 50%), quite a bit ($n = 2$; 14.3%), and very much ($n = 2$; 14.3%). One participant felt that Reiki did not help at all (7.14%). In summary, 78.6% of participants felt an improvement in their pain symptoms from Reiki by week two.

Eleven of the 14 participants who reported experiencing some pain before Reiki at their Time2 follow-up (see Figure 15), felt that four sessions of Reiki helped improve their pain: a little ($n = 3$; 21.4%), quite a bit ($n = 6$; 42.9%), and very much ($n = 2$; 14.3%). Three participants felt that Reiki did not help at all over the course of the five-week intervention (21.4%). In summary, 78.6% of participants felt an improvement with their pain from Reiki by week five.

Figure 16: Improvements in pain over the five-week Reiki intervention

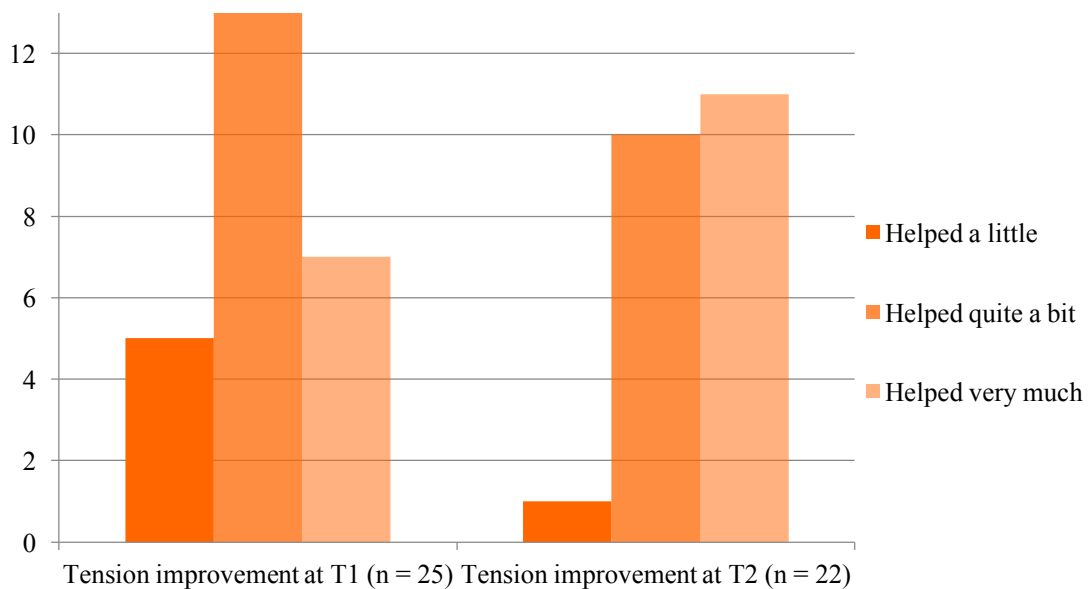


Tension

Participants who reported experiencing tension before Reiki therapy last time were asked whether Reiki helped with their tension. The data in Figure 17 below show that 25 participants who reported experiencing some tension (i.e. a little, quite a bit, very much; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped improve their tension: a little ($n = 5$; 20%), quite a bit ($n = 13$; 52%) and very much ($n = 7$; 28%). In summary, 100% of participants felt an improvement with their tension from Reiki by week two.

The 22 participants who reported experiencing some tension before Reiki at the Time2 follow-up (from Figure 15) felt that four sessions of Reiki helped improve their tension: a little ($n = 1$; 4.5%), quite a bit ($n = 10$; 45.5%), and very much ($n = 11$; 50%). In summary, 100% of participants felt an improvement with their tension from Reiki by week five.

Figure 17: Improvements in tension over the five-week Reiki intervention

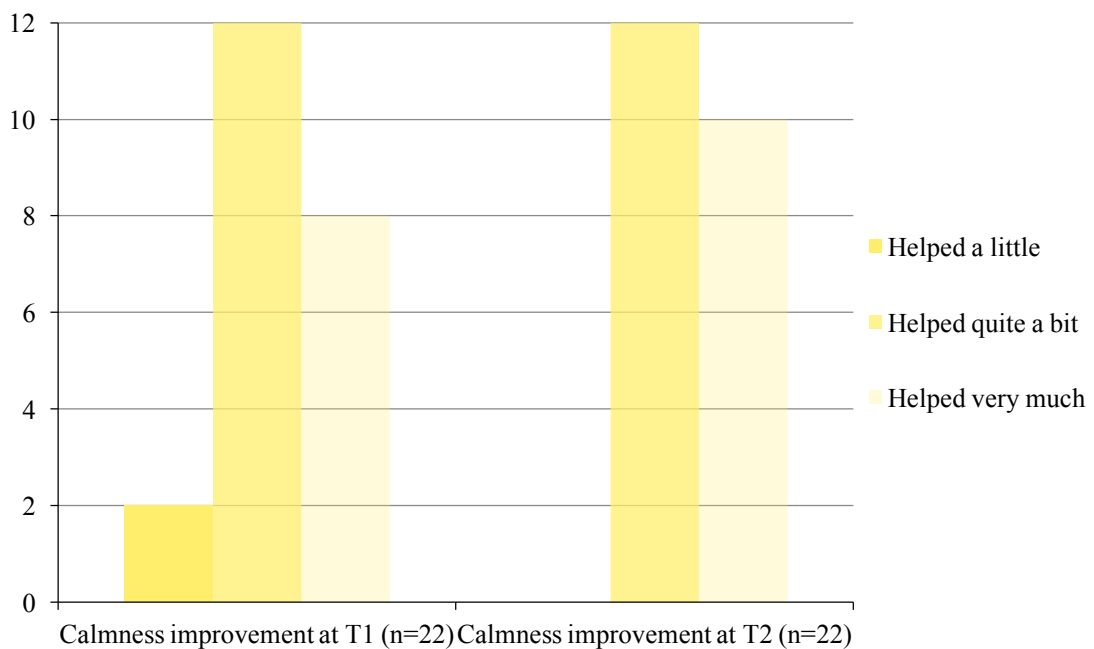


Calmness

Participants who reported experiencing low levels of calmness before Reiki therapy last time were asked whether Reiki helped with their calmness. The data in Figure 18 below show that 22 participants who reported experiencing some low level of calmness (i.e. not at all, a little, quite a bit; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped improve their calmness: a little ($n = 2$; 9.1%), quite a bit ($n = 12$; 54.5%), and very much ($n = 8$; 36.4%). In summary, 100% of participants felt an improvement with their calmness from Reiki by week two.

The 22 participants who reported experiencing some low levels of calmness before Reiki at the Time2 follow-up (from Figure 15) felt that four sessions of Reiki helped improve their calmness: quite a bit ($n = 12$; 54.5%), and very much ($n=10$; 45.5%). In summary, 100% of participants felt an improvement with their calmness from Reiki by week five.

Figure 18: Improvements in calmness over the five-week Reiki intervention

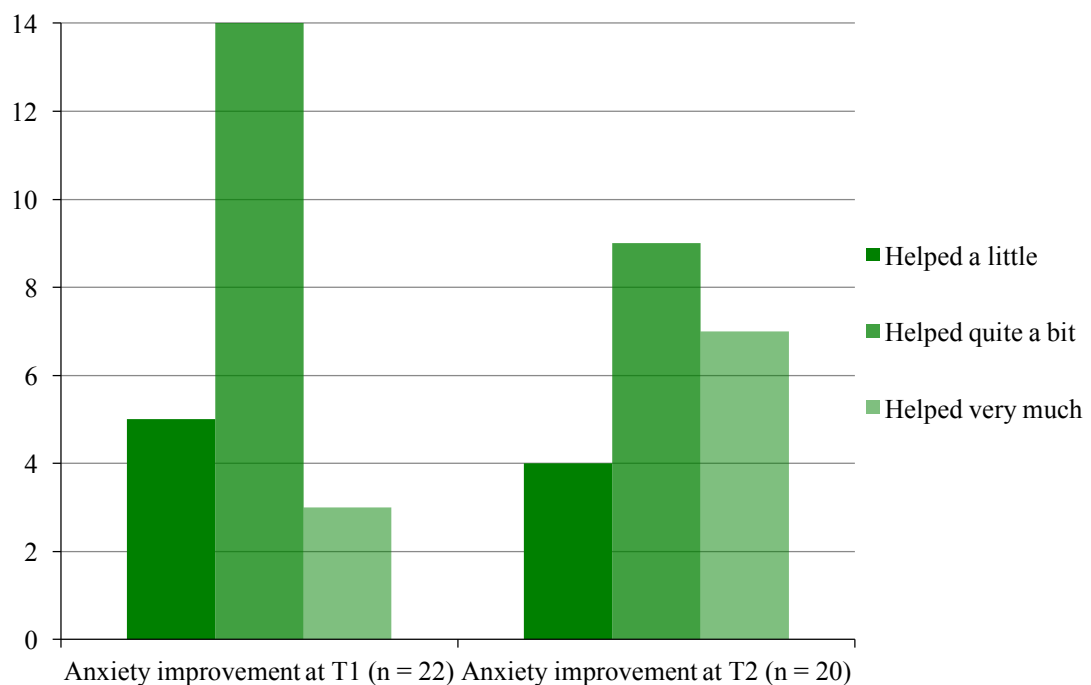


Anxiety

Participants who reported experiencing anxiety before Reiki therapy last time were asked whether Reiki helped them feel less anxious. The data in Figure 19 below shows that 22 participants that reported experiencing some anxiety (i.e. a little, quite a bit, very much; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped them feel less anxious: a little ($n = 5$; 22.7%), quite a bit ($n = 14$; 63.6%), and very much ($n = 3$; 13.6%). In summary, 99.9% of participants felt an improvement with their anxiety from Reiki by week two.

The 20 participants who reported experiencing some anxiety before Reiki at the Time2 follow-up (from Figure 15) felt that four sessions of Reiki helped them feel less anxious: a little ($n = 4$; 20%), quite a bit ($n = 9$; 45%), and very much ($n = 7$; 35%). In summary, 100% of participants felt an improvement with their anxiety from Reiki by week five.

Figure 19: Improvements in anxiety over the five-week Reiki intervention

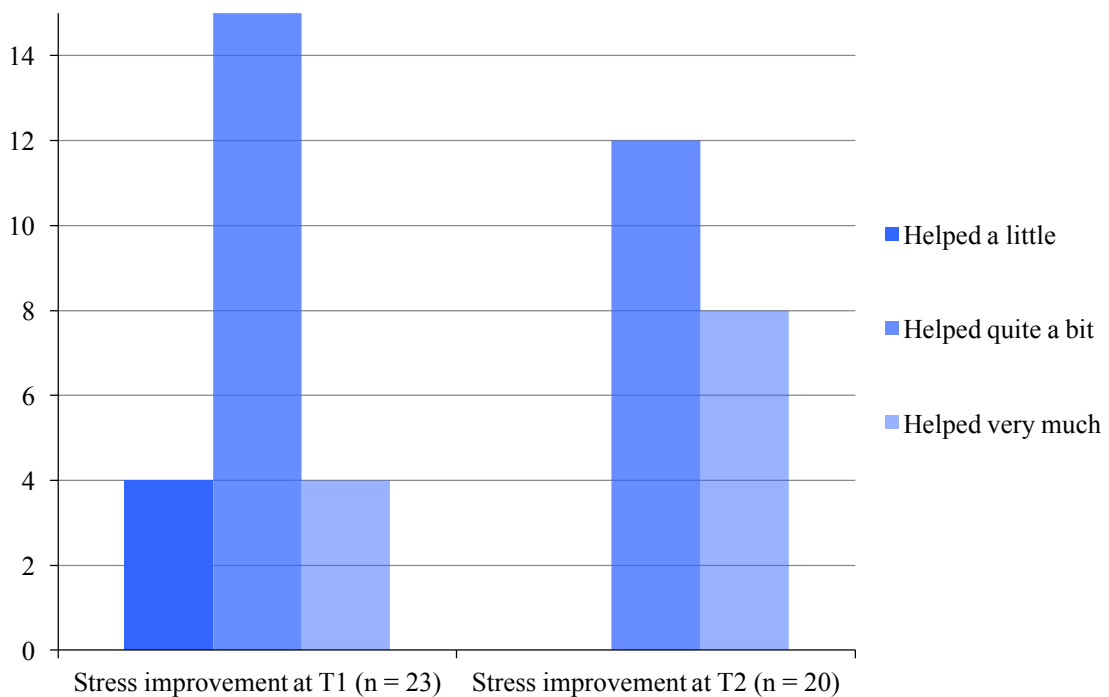


Stress

Participants who reported experiencing stress before Reiki therapy last time were asked whether Reiki helped them feel less stressed. The data in Figure 20 below show that 23 participants who reported experiencing some stress (i.e. a little, quite a bit, very much; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped them feel less stressed: a little ($n = 4$; 17.4%), quite a bit ($n = 15$; 65.2%), and very much ($n = 4$; 17.4%). In summary, 100% of participants felt an improvement with their stress from Reiki by week two.

The 20 participants who reported experiencing some stress before Reiki at the Time2 follow-up (from Figure 15) felt that four sessions of Reiki helped them feel less stressed: quite a bit ($n = 12$; 60%), and very much ($n = 8$; 40%). In summary, 100% of participants felt an improvement with their stress from Reiki by week five.

Figure 20: Improvements in stress over the five-week Reiki intervention

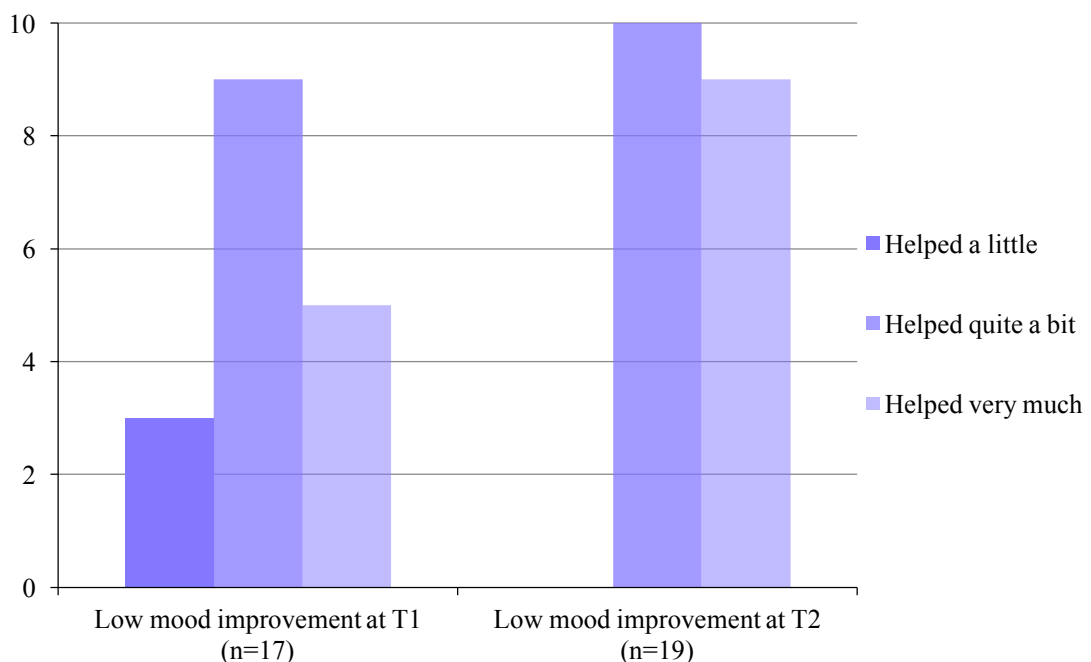


Low mood

Participants who reported experiencing low mood before Reiki therapy last time were asked whether Reiki helped lift their mood. The data in Figure 21 below show that 17 participants who reported experiencing some low mood (i.e. a little, quite a bit, very much; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped lift their mood: a little ($n = 3$; 17.6%), quite a bit ($n = 9$; 53%), and very much ($n = 5$; 29.4%). In summary, 100% of participants felt an improvement in their low mood from Reiki by week two.

The 19 participants who reported experiencing some low mood before Reiki at the Time2 follow-up (from Figure 15) felt that four sessions of Reiki helped lift their mood: quite a bit ($n = 10$; 52.6%), and very much ($n = 9$; 47.4%). In summary, 100% of participants felt an improvement in their low mood from Reiki by week five.

Figure 21: Improvements in low mood over the five-week Reiki intervention

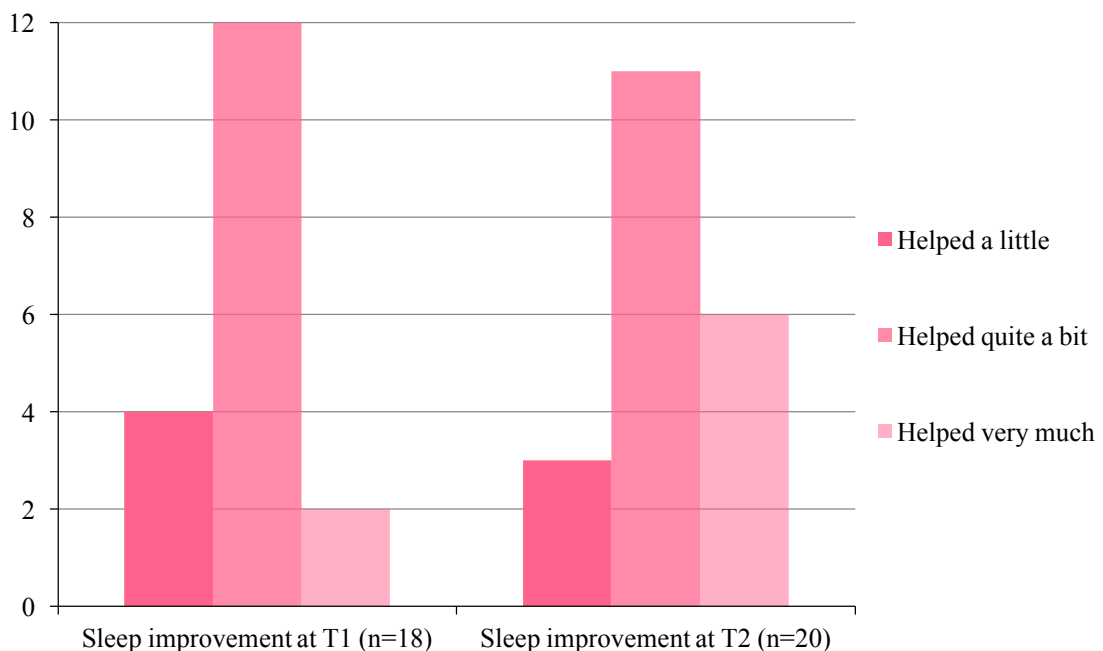


Trouble sleeping

Participants who reported experiencing trouble sleeping before Reiki therapy last time were asked whether Reiki helped them sleep. The data in Figure 22 below show that 18 participants who reported experiencing some trouble sleeping (i.e. a little, quite a bit, very much; from Figure 14) before Reiki at their Time1 follow-up, felt their first session of Reiki therapy helped them sleep: a little ($n = 4$; 22.2%), quite a bit ($n = 12$; 66.7%), and very much ($n = 2$; 11.1%). In summary, 100% of participants felt an improvement in their sleep from Reiki by week two.

The 20 participants who reported experiencing some trouble sleeping before Reiki at the Time2 follow-up (from Figure 15) felt that four sessions of Reiki helped them sleep: a little ($n = 3$; 15%), quite a bit ($n = 11$; 55%), and very much ($n = 6$; 30%). In summary, 100% of participants felt an improvement in their sleep from Reiki by week five.

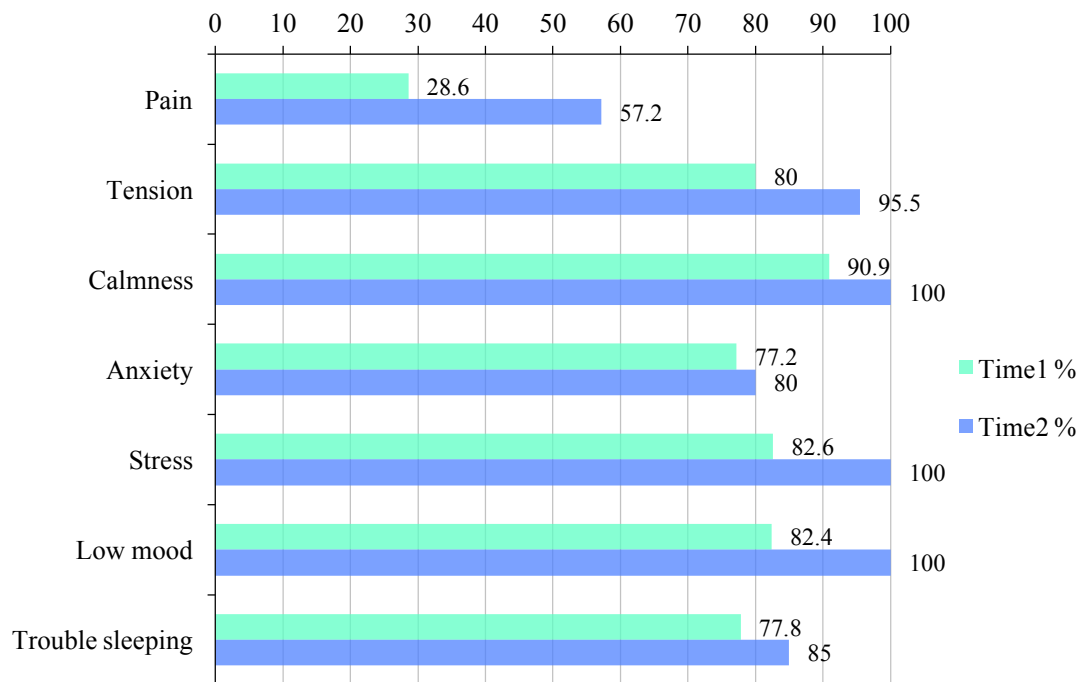
Figure 22: Improvements in trouble sleeping over the five-week Reiki intervention



5.4.2.1.3 Summary of symptomatic change over the intervention period

Figure 23 below summarises findings included in the above seven graphs (Figures 16 to 22) to show the incremental change for participants who felt Reiki provided them with ‘quite a bit’/ ‘very much’ symptomatic improvement. For example, the largest beneficial change between Time1 and Time2 (a 28.6% increase in the number of participants) can be seen in those who reported experiencing ‘quite a bit’/ ‘very much’ pain at both time-points, followed by low mood (17.6%), stress (17.4%), tension (15.5%), calmness (9.1%), trouble sleeping (7.2%), and anxiety (2.8%). These data suggest that Reiki was able to provide ‘quite a bit’ or ‘very much’ continued benefit or a beneficial change in all seven health outcomes over the five-week intervention period.

Figure 23: Cumulative differences in beneficial change over the five-week period



5.4.2.1.4 Exploring duration of improvement at T1 and T2 intervals

Data for the 25 participants were analysed at week two (Time1) and week five (Time2) respectively to evaluate how long the improvements lasted on each health outcome. Participants were asked at both follow-up visits whether Reiki helped with their symptoms and if so, how long did this feeling last. Figure 24 gives an indication of the length of time that participants felt Reiki helped with their symptoms at the Time1 and Time2 visit.

Figure 24: Duration of improvements on health outcomes at T1 and T2

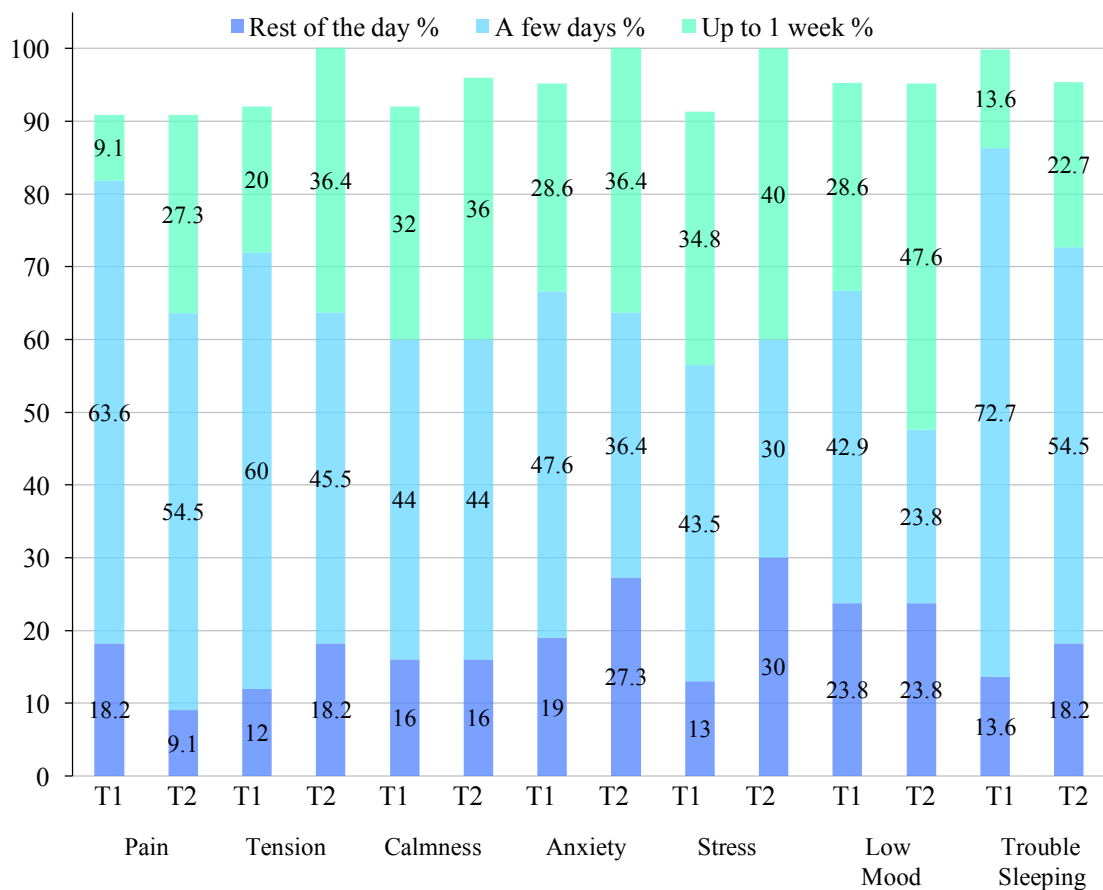


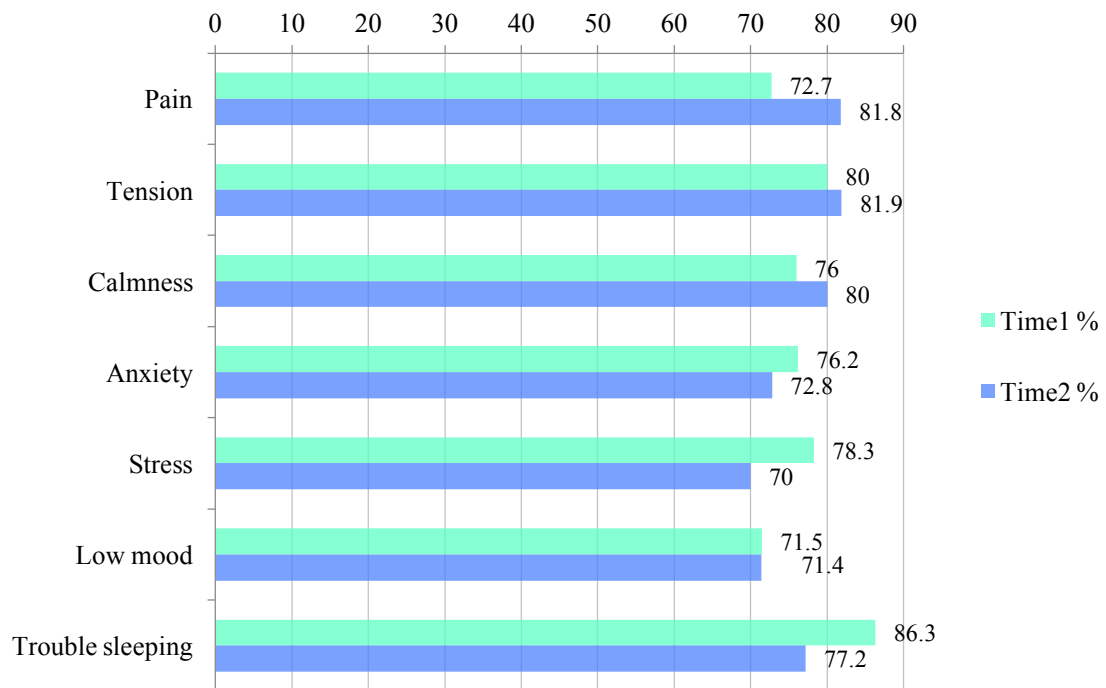
Figure 24 above shows that the longest duration of beneficial change felt by week two was in 72.7% of participants who reported experiencing some trouble sleeping (i.e. quite a bit, very much; from Figure 14) with benefits lasting for ‘a few days’. Equally, beneficial changes lasted for ‘a few days’ in the majority of participants who reported some experience of pain (63.6%), tension (60%), anxiety (47.6%), calmness (44%), stress (43.5%), and low mood (42.9%), respectively. The duration of symptomatic relief lasting ‘a few days’ was sustained until week five for participants who continued to experience some pain and some trouble sleeping (54.5%

evenly), tension (45.5%), and calmness (44%) before Reiki. The majority of participants who reported experiencing some low mood at week two (from Figure 15), felt that Reiki helped them lift their mood for 'up to 1 week' by week five (47.6%), followed by relief lasting the same duration for stress (40%) and anxiety (36.4%).

These data suggest that four sessions of Reiki were able to provide beneficial changes that lasted for a few days in participants experiencing pain, trouble sleeping, tension and calmness, and up to one week in participants experiencing low mood, stress and anxiety over the course of the five-week period.

5.4.2.1.5 Summary of duration of benefit over the intervention period

Figure 25 (p. 99) summarises the data contained in Figure 24 to show only the incremental differences in the total number of participants between Time1 and Time2 who felt Reiki was able to provide symptomatic relief for 'a few days' / 'up to 1 week'. For example, the pain data shows 72.7% and 81.8% of participants felt that Reiki was able to provide symptomatic relief for 'a few days' / 'up to 1 week' at the Time1 and Time2 follow-up, respectively. A 9.1% difference between the two time-points suggests an increase in the number of participants who felt Reiki's duration of benefits were sustained for a longer time over the five-week time period. Similarly, participants experiencing some trouble with calmness (4%), and tension (1.9%) also reported sustained duration of benefits from Reiki. However, with respect to anxiety (-3.4%), stress (-8.3%), and trouble sleeping (-9.1%), there was no indication of a gradual change in the duration of Reiki's therapeutic benefit by week five.

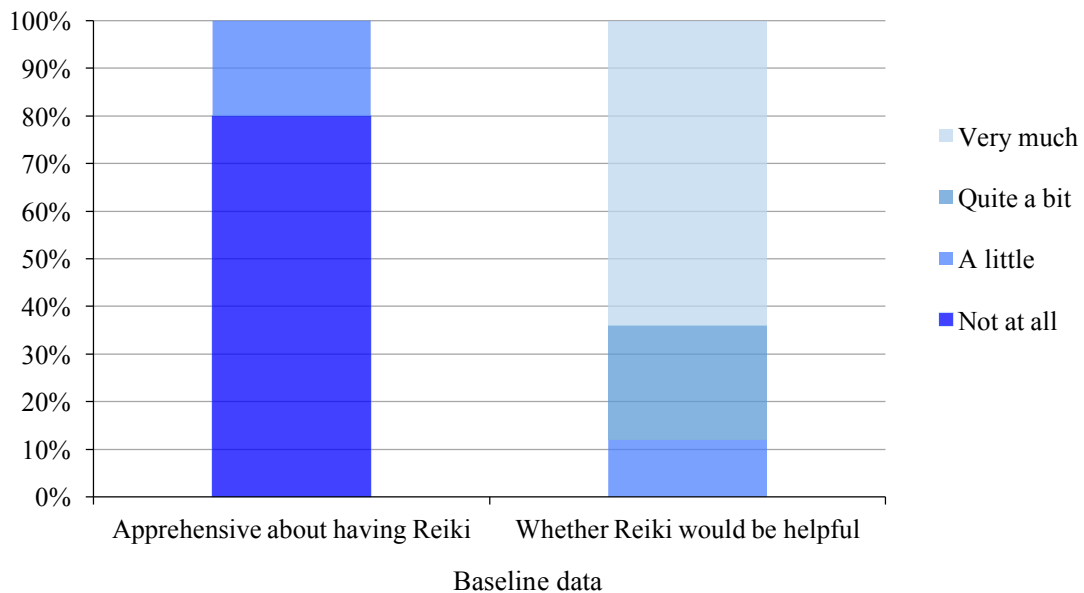
Figure 25: Cumulative differences in duration of improvement over a five-week period.

5.4.3 Exploring correlations

5.4.3.1 Descriptive statistics

Twenty-five of the initial forty outpatients recruited onto the longer-term Reiki evaluation completed the full length of the Reiki evaluation study (i.e. baseline to Time2 follow-up). Participants were asked two questions at baseline: (i) whether they were feeling apprehensive about having Reiki the first time, (ii) and whether they felt Reiki would be helpful. Seven health outcomes were interpreted for symptomatic improvement/ relief as a measure of Reiki's 'perceived effectiveness'. Participants rated their feelings of apprehension about having Reiki and perceived helpfulness of Reiki the first time using four categories (i.e. not at all, a little, quite a bit, very much).

Data for the 25 participants (of the original 40 participants recruited) were explored to determine whether there was a relationship between baseline levels of apprehensiveness about having Reiki and its perceived effectiveness at the longer-term follow-up. In addition, data for Reiki's perceived helpfulness at baseline with perceived effectiveness at the subsequent follow-up visits were also explored. Descriptive statistics for the baseline levels of apprehensiveness and perceived helpfulness are shown in Figure 26 (p. 100).

Figure 26: Baseline feelings of apprehension and helpfulness about Reiki

The data in Figure 26 shows the 80% of participants ($n = 20$) did not feel apprehensive about having Reiki for the first time at all. Twenty percent of participants ($n = 5$) reported feeling ‘a little’ apprehensive. When asked if they thought that Reiki will be helpful: 12% said they think it will help ‘a little’, 24% said ‘quite a bit’, and 64% said ‘very much’.

5.4.3.2 Inferential statistics

5.4.3.2.1 Perceived apprehension and helpfulness at baseline with symptomatic improvement at the longer-term follow-up visits

The relationship between apprehensiveness about having Reiki and its perceived helpfulness (as measured by the Q1 baseline survey) on symptomatic improvement for seven health outcomes at the subsequent follow-up visits was investigated using Spearman’s rank correlation coefficient analyses (r_s). The data are presented in Table 11 (p. 101).

Table 11: Apprehension and perceived helpfulness at baseline on symptomatic improvement

		Baseline Apprehension (n=25)		Baseline Helpfulness (n=25)	
		r_s	p	r_s	p
Pain	Time1	-.06	$p > .79$	.22	$p > .32$
	Time2	-.23	$p > .30$	.03	$p > .90$
Tension	Time1	-.21	$p > .31$	-.16	$p > .44$
	Time2	-.08	$p > .73$	.43	$p < .05$
Calmness	Time1	.01	$p > .97$	.08	$p > .72$
	Time2	.12	$p > .57$	.42	$p < .05$
Anxiety	Time1	.01	$p > .97$	.01	$p > .98$
	Time2	.22	$p > .32$	.37	$p > .09$
Stress	Time1	.12	$p > .58$	-.15	$p > .50$
	Time2	.25	$p > .27$	.25	$p > .27$
Mood	Time1	.15	$p > .50$	-.19	$p > .40$
	Time2	.19	$p > .40$	.14	$p > .55$
Trouble sleeping	Time1	.02	$p > .94$	-.28	$p > .17$
	Time2	-.20	$p > .35$	.15	$p > .48$

r_s : Spearman correlation coefficient, p : probability is significant at the 0.05 level (2-tailed)

The data in Table 11 shows there were no significant correlations between the level of apprehension towards having Reiki the first time and symptomatic improvement at follow-up however; there was a moderate, positive correlation between Reiki's perceived helpfulness at baseline and symptomatic improvement on tension ($r_s = .43, p < .05$) and calmness ($r_s = .42, p < .05$) at the Time2 follow-up, with high levels of perceived helpfulness at baseline associated with higher symptomatic improvement on these two health outcomes.

5.4.3.2.2 Correlations among health outcomes after Reiki

Additional correlation analyses showed relationships among the seven health outcome variables. Findings at the Time1 follow-up are presented in Table 12 below.

Table 12: Spearman's (r_s) correlations among health outcomes at T1

Health outcome	Pain	Tension	Calmness	Anxiety	Stress	Low Mood	Sleep
Pain							
Tension	.32						
Calmness	.13	.14					
Anxiety	.13	.33	.06				
Stress	.35	.48 *	.47 *	.24			
Low mood	.42	.44 *	.30	.09	.80 **		
Sleep	-.02	.15	.22	-.29	.39	.11	

* $p < 0.05$ ** $p < 0.01$

Participants rated symptomatic improvement on seven health outcome variables as a measure of 'perceived effectiveness' of Reiki. Interestingly, the data suggest that Reiki's perceived benefit on one health outcome is associated with benefits on a secondary outcome. The data presented in Table 12 above shows significant correlations between stress, low mood, tension, and calmness at Time1 follow-up. Symptom improvements in stress showed a moderate-positive association with effects on tension ($r_s = .48, p < .05$), on calmness ($r_s = .47, p < .05$) and a strong positive correlation on low mood symptoms ($r_s = .80, p < .01$). A moderate-positive association was also found between symptom improvements in low mood with effects on tension ($r_s = .44, p < .05$).

Data for correlations among the health outcomes at the Time2 follow-up are presented in Table 13.

Table 13: Spearman's (r_s) correlations among health outcomes at T2

Health outcome	Pain	Tension	Calmness	Anxiety	Stress	Low Mood	Sleep
Pain							
Tension	.03						
Calmness	-.33	.38					
Anxiety	-.17	.48 *	.64 **				
Stress	-.10	.63 **	.62 **	.75 **			
Low Mood	-.09	.24	.33	.43	.61 **		
Sleep	-.35	.24	.07	-.13	-.06	.10	

* $p < 0.05$ ** $p < 0.01$

The data presented in Table 13 above show significant correlations between anxiety, stress, tension, calmness and, low mood at the Time2 follow-up. Symptom improvements in anxiety showed a moderate-positive bivariate association with effects on tension ($r_s = .48, p < .05$), and a strong-positive bivariate association on calmness ($r_s = .64, p < .01$). Symptom improvements in stress was associated with a strong association with effects on tension ($r_s = .63, p < .01$), calmness ($r_s = .62, p < .01$), and anxiety ($r_s = .75, p < .01$). A strong-positive association was also found between symptom improvements in low mood with effects on stress ($r_s = .61, p < .01$). In sum, findings suggest that an improvement in symptoms of anxiety is associated with improvements in tension and calmness. Furthermore, an improvement in symptoms of stress show continued benefit on symptomatic improvement in tension and calmness since Time1 follow-up, but also with improvement in anxiety by Time2 follow-up. Lastly, an association between symptomatic improvement in low mood and stress was found at both Time1 and Time2 follow-up, suggesting a continuation of benefit in these outcomes from Reiki.

5.4.4 Exploring the additional feedback data

Participants (n = 25) had completed an exit survey that requested information about their overall experience of Reiki therapy over the course of five weeks.

5.4.4.1 Physical sensations felt during Reiki

Participants were asked to list the physical sensations that best described how they felt after their Reiki sessions. Findings from content analyses were used to generate a word cloud composed of the most recurring responses (Figure 27), in which the size of the word indicates the frequency (i.e. the most common physical sensations felt).

Figure 27: Word cloud showing common physical sensations felt after Reiki



Other typical responses included: *“immense feeling of well-being like I could take on the world; very sleepy”*; *“goose pimples; headache relief from radiotherapy”*; *“at ease”*; *“colours and objects”*; *“cold in top half of head/ shoulders”*; *“intense heat in stomach”*.

5.4.4.2 Common emotions felt during Reiki

Participants were also asked to list the emotions that best described how they felt during their Reiki sessions. Findings from content analyses of the most recurring responses are shown in the word cloud in Figure 28 (p. 105).

Figure 28: Word cloud showing common emotions felt during Reiki

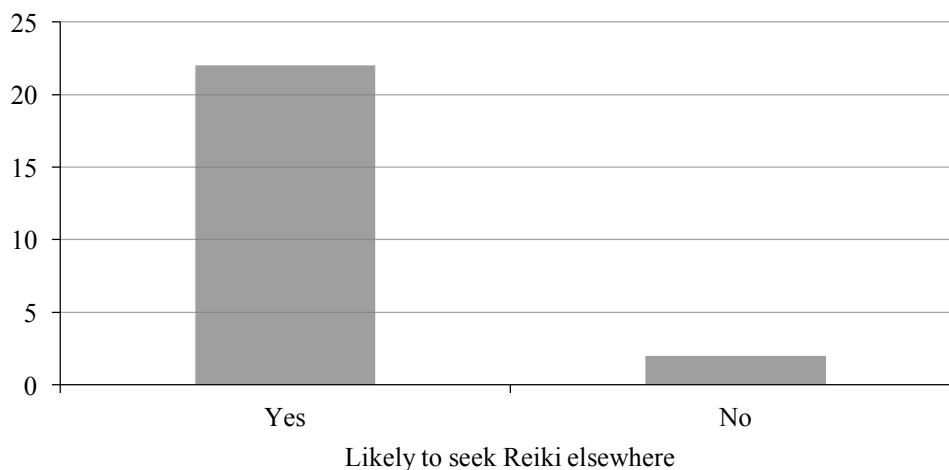


Other typical responses included: *“tingling warmth felt like worries were dissipating and drifting away”*; *“saw violet and purple, very tranquil”*; *“at ease”*.

5.4.4.3 Likelihood to seek Reiki elsewhere and recommend to others

The data presented in Figure 29 below were collected in response to whether participants were likely to seek more Reiki therapy elsewhere.

Figure 29: Bar chart showing if participants were likely to seek Reiki elsewhere



In addition, responses to whether participants would recommend Reiki to others included: *“Yes”* (100%).

5.5 CHAPTER CONCLUSION

This chapter presented the baseline, same-day, and longer-term follow-up data collected using the in-house instrument as part of a service evaluation assessing the effects of Reiki on seven health outcomes. The findings indicate that participants felt some symptomatic improvement between the baseline assessment and the same-day follow-up. Effect sizes used to quantify the observed effect together with statistical significance showed some variation between the inpatients and outpatients. The outpatient data indicated significant differences before-and-after Reiki with Reiki having a moderate effect on symptoms of pain; and a strong effect on tension, calmness, anxiety, stress and low mood. The inpatient data also showed significant differences but with Reiki having a weak effect on symptoms of low mood; moderate effect on pain, tension, calmness, anxiety; and a strong effect only on stress. An analysis of the longer-term follow-up in the outpatient group indicates benefits over the two time-points. A further exploration indicated incremental changes over Time1 and Time2 suggesting some therapeutic benefit from Reiki over the course of a five-week intervention.

Data for relationships between baseline feelings of apprehensiveness about having Reiki for the first time did not indicate a significant relationship with symptomatic improvement at follow-up. However, perceived helpfulness was positively correlated with symptomatic improvement at Time2 follow-up with higher levels of perceived helpfulness associated with higher perceived effects of symptom improvements in tension and calmness by week five. These variables showed significant inter-correlations and further research is necessary to explore the nature of these relationships (e.g. whether symptom improvements in one outcome is able to positively alter other outcomes/ psychological states).

Participants rated their overall experiences as positive. Common physical sensations felt after Reiki were: *“warm”*, *“relaxed”*, and *“energised”*. Common emotions felt during Reiki were: *“peace”*, *“calm”* and *“relaxed”*. Twenty-two percent of participants said that they were likely to seek Reiki elsewhere and 100% stated they would recommend Reiki to others. The implications of these findings are discussed in chapter seven but first, the reader will find a supplementary study in the next chapter and at this stage, it is pertinent to mention the underlying motivation behind it.

The positive findings presented in this chapter suggest that Reiki may be helpful and thus triggered an interest to examine further a neglected but important area. To complement the

findings from this doctoral study, a supplementary study was conducted to ascertain the status of Reiki's current provision at other cancer centres within NHS England, since completing the Reiki evaluation at the CSC. The next chapter outlines the processes involved to collect this data, and presents the findings from this supplementary study.

CHAPTER 6

THE PROVISION OF REIKI THERAPY WITHIN NHS ENGLAND

6.1 CHAPTER INTRODUCTION

The rationale for conducting the Reiki therapy evaluation was imbedded in the need to examine the relationship between offering a specific health service (i.e. Reiki therapy) with the health needs of the target population (i.e. patients attending treatment at the CTC). It was established in the previous chapter that the cancer patients at the hospital felt Reiki therapy offered therapeutic benefit alongside their conventional treatment plan on a range of health outcomes.

The Reiki study at the CSC was conducted in the absence of known knowledge of similar evaluations or specific guidelines on conducting health services research, specifically concerning energy-based modalities such as Reiki. The researcher had therefore recently endeavoured to develop a more updated understanding concerning national-level advances in the provision and evaluation of Reiki services since this study was completed in 2013. This chapter presents the reader with a summary of the methods and main findings from this supplementary study conducted between the months of August and September 2016.

6.2 STUDY AIMS

Acute National Health Service (NHS) Trusts in England were contacted to gain insight into (i) the provision of Reiki therapy, (ii) the types of services that offer Reiki and, (iii) whether a formal evaluation of the Reiki service had been conducted to evaluate its efficacy and benefit to patients.

6.3 METHOD

6.3.1 Establishing the rationale for NHS Trusts to contact

Acute Trusts (ATs) are the result of the fundamental restructure in April 2013 within the NHS system in England. This restructure provided ATs with the autonomy to monitor their own expenditure (NHS UK website, 2016) and to provide high-quality secondary care (i.e. allied health care services such as complementary therapies). In addition, many ATs have also gained a Foundation Trust (FT) status (i.e. are independent legal entities from the DOH) and thus, are free from central government control; NHS UK website, 2016). A list of ATs was compiled using the NHS directory (derived from the list of NHS Acute Trusts in England; NHS Choices, 2016). The list comprised 236 trusts encompassing some overlap between ATs with other Trust types (e.g. community health; partnership; mental health Trusts etc.) The final list was refined down to 180 NHS ATs (some comprising FT status too) by removing instances where there was overlap.

6.3.2 Written communication requesting information

Requests for the release of information were made under an act of Parliament in the UK called the Freedom of Information (FOI) Act (2001); the researcher was rightfully able to request for disclosure of information held by the NHS.

In August 2016, 180 letters were sent by email to respective ATs in England requesting information about Reiki therapy provision. The request letter comprised a brief outline pertaining to the research agenda (see [Appendix S](#)). The data requested were extensive and covered aspects of the provision and service evaluation of Reiki therapy within the Trust as follows: (i) provision of CAM therapies, (ii) provision of Reiki as part of the portfolio of CAM therapies, (iii) types of services or departments that provided Reiki therapy, (iv) whether a formal service evaluation of Reiki therapy was completed, (v) reasons for offering Reiki therapy, (vi) length of time Reiki therapy had been offered, (vii) the number of Reiki sessions

provided per patient, (viii) the number of qualified CAM therapists within the trust, (ix) the number of qualified Reiki therapists within the trust, (x) the number of referrals to the CAM service, (xi) the number of patients that had accessed the Reiki service, (xii) details about psychological outcomes shown to benefit from Reiki, and (xiii) details about physiological outcomes shown to benefit from Reiki.

On sending the letters to each trust, a spreadsheet was created and regularly updated to ensure that all requests under the FOI Act (2000) were acknowledged within 48 hours and responses to information requested were received within the statutory time limit of 20 working days. Communication was maintained with FOI officers within each Trust where challenges had occurred with regards to the release of information within statutory time limits.

6.4 RESULTS

In total, 168 of the 180 Trusts (93%) contacted had successfully disclosed the requested information. Issues encountered with collating responses from 12 Trusts (6.7%) have been considered in the conclusion section of this chapter.

A total of 71 Trusts (42%) of the 168 that responded stated that they did not provide CAM therapies for patients. Fifty Trusts (29.8%) reported providing CAM but not Reiki therapy. Thirty-seven of the 168 Trusts (22%) reported providing Reiki therapy. For these trusts, the responses were grouped into whether the trust (i) stated the services or departments within the trust offering Reiki, (ii) specified reasons for offering Reiki, (iii) specified details about the provision of their Reiki service (i.e. length of time offered), (iv) had formally evaluated their Reiki service, and (v) held information on psychological and physiological outcomes shown to benefit from Reiki.

6.4.1 Provision of Reiki therapy within the NHS

6.4.1.1 Services or departments providing Reiki

In total, 28 of the 37 Trusts (75.7%) reported offering Reiki in their oncology/ haematology services. This included terms: 'cancer centre', 'cancer services department', 'cancer information and support centre', 'coping with cancer service', 'funded pilot on cancer rehabilitation', 'people affected by cancer', 'cancer health and well-being centre', 'treatment centre', 'holistic centre', 'breast care unit' and 'ward'. The Pennine Acute Hospitals NHS Trust

informed the researcher that they have intentions to expand delivery of Reiki therapy to further departments in the future. For instance:

“Cancer services (breast & haematology but looking to expand to ward areas via the Macmillan Cancer Information & Support Centre.)”

Pennine Acute Hospitals NHS Trust

Four trusts (10.8%) reported provision of Reiki for hospice, palliative and End of Life (EOL) care services. The Walsall Healthcare NHS Trust informed the researcher that they provide Reiki therapy primarily for EOL care. The Trust also added:

“We do not 'offer' Reiki but if a patient is at the End of their Life and they request Reiki it may then be provided at that time if no other therapies are suitable. This is part of the holistic Palliative Care. We would not describe it as a Reiki service but as a Specialist Complementary Therapy Service for Palliative and End of Life Care.”

Walsall Healthcare NHS Trust

Three trusts (8%) reported offering Reiki to children, adolescents and adult acute Mental Health Services (MHS). For instance:

“Yes [to Do you offer Reiki therapy?]. The alternatives offered in the Child and Adolescent Mental Health Service (CAMHS) are Hypnotherapy and Aromatherapy. Some physiotherapists in the Trust practise acupuncture. Occasionally the Community pain service uses clinical hypnosis mainly to help with pain relief or coping with pain.”

Humber NHS Foundation Trust

The Humber NHS Foundation Trust was specific in reporting that it offers Reiki therapy as part of their child and adolescent MHS. Responses from two other Mental Health Trusts (MHT) included:

“The Trust currently offer Reiki to inpatients in both North and South Community Mental Health Services.”

Pennine Care NHS Foundation Trust, North and South Division

“Currently we have Reiki offered at the Occupational Therapy Department at the Bethlem Royal Hospital and 2 of the wards at our Lambeth Hospital site.”

South London and Maudsley NHS Foundation Trust

Trusts that did not have the provision of Reiki services within the hospital provided information about other charities outside of the hospital premises to which they refer their patients to access complementary therapies, including Reiki, at a discounted rate or at no cost. For instance:

“The Royal National Orthopaedic Hospital NHS Trust is a specialist orthopaedic and does not offer this service. We do have an organisation called “The Disability Foundation” who offer this service on a voluntary basis at no cost to the Trust. I am unsure if the Freedom of Information Act applies to them as they are a charity but they confirm that they are happy to give you what you need if they hold that information. This would depend on the time needed to collate the information. They can be contacted at the following email address [redacted] and their website is [redacted].”

Royal National Orthopaedic Hospital NHS Trust

“The trust does not offer complementary therapies. However, there is a “[redacted] Salon” that is able to provide these treatments through charitable funding. This is a bespoke salon with a treatment room for patients who wish to try alternative therapies. Patients pay for the therapies but at a discounted rate. These treatments are provided on a voluntary basis so are not routinely available. Patients with cancer are offered Living Well through [redacted] where they can attend events for relaxation and therapy.”

University Hospitals of North Midlands

6.4.1.2 Reasons for provision of Reiki therapy

Reasons for providing Reiki among the 37 Trusts were categorised into seven common themes: relaxation (15 Trusts); anxiety (6 Trusts, stress (6 Trusts), patient experience (8 Trusts), well-being (physical, mental and spiritual; 6 Trusts), non-invasive therapy (5 Trusts), and patient demand (4 Trusts). For instance, typical responses included:

Reason reported	Trust response
1. Relaxation	<i>“Introducing patients to Reiki and its benefits for well-being and relaxation.”</i> Pennine Care NHS Foundation Trust, South Division
2. Anxiety	<i>“Reiki is offered to cancer patients and carers to try to help reduce anxiety brought on by a cancer diagnosis.”</i> East Cheshire NHS Trust
3. Stress	<i>“We use Reiki mini-treatments (3 positions, 10-minute treatment) for purposes of relaxation and stress alleviation.”</i> Pennine Care NHS Foundation Trust, North Division
4. Patient experience	<i>“To provide patient choice and enhance the patient experience. Therapy is largely charitably funded, the remit of the charities being to improve patient experience within NHS...”</i> University College London Hospitals NHS Foundation Trust

“To enhance the patient experience and increase the portfolio of complementary therapies held at the cancer care.”

Wrightington, Wigan, and Leigh NHS Foundation Trust

5. Well-being *“Reiki is offered as a therapy as it helps promote physical mental and spiritual feeling of well-being.”*

Sherwood Forest Hospitals NHS Foundation Trust

Two Trusts reported the significance of Reiki as a non-invasive therapy for patients at End of Life (EOL). For instance:

6. Non-invasive *“Invaluable as a non-invasive therapy when people are very sick and at EOL.”*

Hitchingbrooke Health Care NHS Trust

“To provide relaxation and a feeling of calm at the end of life when more evidence based therapies are not suitable due to contraindications.”

Walsall Healthcare NHS Trust

Sheffield Teaching Hospitals NHS Foundation Trust reported a few themes but also mention the provision of Reiki due to its hands-off nature. For instance:

“Reiki is one of the therapies chosen as it can be used to promote relaxation and to help relieve stress and tension. The gentle use of touch may provide reassurance and comfort, and can make a huge difference to a patient’s well-being. Touch has a powerful effect on emotion and after the stress of hospitals and a cancer diagnosis, patients may find peace and calm in a session of reiki. It is also important that reiki can be offered as a non-touch therapy if a hands on approach is not appropriate. Recent research has demonstrated that healing and reiki may be particularly helpful for cancer related pain and qualitative research studies have found repeated benefits to include increased energy and well-being and feelings of calmness, warmth and relaxation.”

Sheffield Teaching Hospitals NHS Foundation trust

7. Patient demand *“Reiki is offered as part of a full range of beauty & complementary therapy services. It is offered for its relaxing and restorative benefits and as a result of patient demand.”*

Barnsley Hospital NHS Foundation Trust

“There is a high patients’ demand for this service.”

Guy’s and St Thomas’ NHS Foundation Trust

The South Tees Hospital NHS Foundation Trust's stated that patient demand for Reiki is attractive to a subset of the patient group due to its relaxing and non-invasive nature. For instance:

“Although Reiki is not the most commonly recommended or used therapy, it continues to remain popular with patients for relaxation and is often offered to patients who wish to access a complementary therapy where massage may not be appropriate due to clinical treatment (e.g. radiotherapy entry/ exit site, surgery site or lymphedema). Reiki also remains popular with our more physically frail and palliative patients who want to access a complementary therapy for relaxation but would prefer to remain fully clothed.”

South Tees Hospitals NHS Foundation Trust

6.4.1.3 Details about the provision of Reiki services

6.4.1.3.1 Number of sessions of Reiki

The Trusts' responses varied in the number of sessions comprising a 'course of therapy'. Numbers ranged from a minimum of two sessions and a maximum of eight per patient. The most frequent number of sessions among the Trusts comprising a course of therapy for each patient was six sessions (11 Trusts), followed by four sessions (6 Trusts). Five Trusts reported determining the number of sessions based on individual need. The Liverpool Heart and Chest NHS Foundation Trust did not collate this information and therefore were unable to provide a response.

6.4.1.3.2 Number of qualified Reiki therapists

The Trusts' responses varied with regards to the number of Reiki therapists working within the service. Numbers ranged from a minimum of one therapist to a maximum of six therapists. It was common to have one (10 Trusts) to two (13 Trusts) Reiki therapists within the Trust.

6.4.1.3.3 Number of patients that accessed Reiki service

It was challenging for the researcher to collate Trust responses for the number of patients that accessed Reiki, as no agreed timeframes had been set to collate the statistics (e.g. year to date). Consequently, variation in the responses indicated statistics were collated using a week, month, annual and, bi-annual figures. As it was not possible to report this information accurately, the researcher coded the data into categories: 0 – 20 (7 Trusts), 20 – 40 (3 Trusts), 40 – 60 (3 Trusts), 60 – 80 (2 Trusts), 80 – 100 (1 Trust), 100 – 120 (3 Trusts), 160 – 180 (1 Trust), and 180 – 200 (1 Trust). The City Hospitals Sunderland NHS Foundation Trust reported over 420

between 2015-2016 and, the University College London Hospitals NHS Foundation Trust reported *“Approximately a 1000 in the last year”*.

Ten Trusts that had provision to offer Reiki reported that they did not collate statistics on how many patients accessed their Reiki service. For instance:

“Varies at any one time, unable to provide accurate historic data.”

Northumbria Healthcare NHS Foundation Trust

“This is not recorded in a reportable format.”

Barnsley Hospital NHS Foundation Trust

In some cases, the requested information can be denied by the organisation if the cost of collating the information exceeds £450 (as cited on UK Government website, 2013). Guys’ and St Thomas’ Trust were unable to provide specific information on the basis that it would be too expensive to collate. For instance:

“The Trust holds the requested information [number of patients that have accessed your Reiki service] but considers it exempt under section 12 of the Act, as the cost of compliance is estimated to exceed the appropriate limit. A manual search would be required to provide the requested information.”

Guy’s and St Thomas’ NHS Foundation Trust

6.4.1.3.4 Length of time Reiki provided

Responses varied in terms of the length of time Trusts had provided Reiki therapy. Data were coded into categories for ease of interpretation. Trusts reported providing Reiki for: less than 1 year (2 Trusts), less than 5 years (8 Trusts), between 5-10 years (11 Trusts), and between 10-15 years (7 Trusts). The Nottinghamshire Healthcare NHS Foundation Trust estimated the duration of the provision of their Reiki therapy service to be at least 16 years; this was the longest length of time among all Trusts that reported provision of Reiki therapy.

6.4.1.4 Formal evaluation of Reiki therapy

None of the 37 Trusts providing Reiki therapy reported conducting a formal evaluation of their Reiki therapy service.

Twenty Trusts (54%) were explicit in stating that no formal evaluation had been undertaken. Twelve trusts (32%) reported conducting a general evaluation of the CAM service either within

the service or as part of the larger National Cancer Peer Review Audit, however, all trusts specified Reiki therapy was not a separate entity during the CAM service evaluation. Four Trusts provided information about currently being in the process of conducting an evaluation or having an intention to conduct one in the near future. One of these Trusts (2.7%) provided information about their intention to conduct an evaluation. More specifically:

“The Trinity Holistic Centre undertook a whole service review in 2011 which included the Reiki service though was not specific to it. Ongoing service evaluation and patient experience feedback is undertaken for all services within the Trinity Holistic Centre (though not specific to Reiki). The Trinity Holistic Centre is currently phasing in the use of the Warwick Edinburgh Well-being Scale as an evaluation tool during 2016, which will enable therapy specific comparison and evaluation in 2017. A student from Edinburgh University is currently undertaking a PhD study considering the impact of support available at the Trinity Holistic Centre (including complementary therapies) for people affected by cancer.”

South Tees Hospital NHS Foundation Trust

The Pennine Acute Hospitals NHS Trust stated that they have not conducted a formal evaluation to date but were developing a measure to enable evaluation. Similarly, The Nottinghamshire Healthcare NHS Foundation Trust stated that they are planning to administer two psychometrically tested measures. These responses are slightly different from the one above as they specify an interest to evaluate the Reiki service rather than an evaluation of their CAM service as a whole. For instance:

“No, questionnaire is in progress in collaboration with the Macmillan Breast Care Nurses.”

Pennine Acute Hospitals NHS Trust

“No, a formal evaluation has not been conducted. The last audit was part of the East Midlands Cancer Network in 2007. We are currently looking at implementing POS tool and MYCAW evaluation tool.”

Nottinghamshire Healthcare NHS Foundation Trust

Two Trusts reported that they were currently in the process of evaluating their Reiki service: For instance:

“We are currently using MyCAW to evaluate the service”

Plymouth Hospitals NHS Trust

“In process of evaluating complementary therapy service as a whole.”

University College London Hospitals NHS Foundation Trust

Other methods of collating feedback reported were user satisfaction surveys and informal verbal feedback. Two Trusts did not provide a response to this item.

6.4.1.4.1 Psychological benefits of Reiki

Fourteen Trusts (37.8%) reported non-collation of psychological health outcomes shown to benefit from Reiki therapy. Typical responses included:

“There is no formal or routine collection of outcomes data.”

South London and Maudsley NHS Foundation Trust

“The Trust is unable to provide this information as no formal audit has yet been undertaken.”

Harrogate and District NHS Foundation Trust

Out of the thirteen responses that reported information about psychological outcomes shown to benefit from Reiki, the commonly occurring themes across responses were: relaxation (10 Trusts), anxiety (5 Trusts), increased feeling of well-being (4 Trusts), stress (4 Trusts), improved perception of pain (3 Trusts) and, peace and calm (4 Trusts). Other responses included: *“reduced fear”, “lifting of mood”, “increased motivation”, “increased energy”, “improved sleep”, “eating better”, “less breathlessness”, “relieves tension”, “feel supported and understood”* and, *“it is the only time anyone at the hospital has asked how I am feeling about my illness and how I am coping”*. The University College London Hospitals NHS Foundation Trust informed the researcher that they were currently in the process of evaluating their service. More specifically:

“Complementary therapy outpatient service is currently being evaluated for these outcomes and others. This will provide data about complementary therapy service as a whole not specifically Reiki outcomes. Anecdotal evidence is that some patients find benefit from this therapy and choose to have further sessions.”

University College London Hospitals NHS Foundation Trust

A response that the researcher was not able to collate included:

“Most beneficial treatment in the above [when people are very sick and at EOL] group of patients.”

Hinchingbrooke Health Care NHS Trust

6.4.1.4.2 Physiological benefits of Reiki

Twenty-Two Trusts (59.5%) reported non-collation of physiological health outcomes shown to benefit from Reiki therapy. Typical responses included:

“Reiki is offered for relaxation purposes within the Trinity Holistic Centre and not specifically offered to improve physiological outcomes - no specific patient reported outcomes have been gathered to establish any physiological outcomes for Reiki.”

South Tees Hospitals NHS Foundation Trust

Out of the nineteen responses that reported information for physiological outcomes shown to benefit from Reiki, the commonly occurring themes across responses were similar to the psychological health outcomes mentioned above: *an increased feeling of well-being* (5 Trusts), *relaxation* (4 Trusts), and *improved sleep* (2 Trusts). Other responses included: *reduced nausea, tension, reduced pain perception, stress, and increased calmness, energy and warmth*. The aforementioned responses have been discussed in the discussion section below. Two Trusts specified physiological outcomes as the researcher requested. For instance:

“Known physiological outcomes include; lowered heart rate & blood pressure, improved circulation, can drop in blood sugar levels, improved mobility, reduced pain. This list is not an exhaustive list.”

Barnsley Hospital NHS Foundation Trust

“Some quotes from the service feedback forms: Less soreness in the area where chemotherapy had been delivered; sometimes more energised, sometimes more tired; significant less hot flushes and night sweats; energy levels have increased; less tension; less feelings of nausea; took side effects away from the pills I take; temporary removal of joint pain in shoulder and knee.”

York Teaching Hospitals NHS Foundation Trust

6.5 DISCUSSION

6.5.1 Summary of main findings

This study aimed to explore Reiki therapy provision within the English NHS. Despite the unproven efficacy and the limited evidence base, it is clear from the data collected from the FOI requests that there is the provision of Reiki therapy within the NHS, albeit at a lesser level than the provision of CAM therapies on the whole. Previous research has suggested that CAM is not readily available for patients to access within supportive and palliative services within the British NHS (e.g. Egan et al., 2012). However, this study has identified 50 Trusts providing CAM therapies to patients within the NHS in England alone. Specifically, Reiki was provided in 37 of the 50 Trusts (74%). It is noteworthy that the rationale for providing Reiki therapy among the majority of Trusts appears to be firmly grounded in the principles of delivering an integrated approach to care. More specifically, Reiki was included alongside the patients' conventional cancer treatment plans within most oncology departments. The findings showed 75.7% of the Trusts that have provision to offer Reiki therapy do so within oncology, palliative and EOL care services, together with hospices. Furthermore, Trusts that did not have the provision to provide Reiki had dedicated arrangements with charities outside of the hospital premises to refer patients for therapy. These findings show recognition for an integrated approach that includes Reiki provision alongside conventional cancer treatment plans to enhance patient experience.

Common reasons for providing Reiki are concentrated towards its restorative therapeutic benefit for patients with cancer experiencing stress and anxiety. It is also apparent from the data that its non-invasive nature is suited for the needs of palliative care patients. Reiki provision for well-being (physical, mental and spiritual) and patient experience were among the other reasons for providing Reiki within the Trusts. However, it is unclear at this stage how representative these data are as the majority of Trusts that reported conducting some form of an evaluation audited their CAM service as a whole thus, making it difficult to attribute some of the reported benefits to Reiki alone.

The delivery of Reiki within CAM services in the NHS England has been established for a long period in some Trusts, some as long as 16 years, with an adequate number of therapists to help support with the provision of CAM. It is interesting to note that 54% of the Trusts explicitly stated that they had not conducted a formal evaluation of their Reiki service despite providing it within their portfolio of CAM therapies to enhance patient experience; 32% of Trusts had

conducted a non-Reiki specific service evaluation (part of a larger audit or evaluation of the CAM service as a whole). Trusts had given the impression of being content with the continued provision of Reiki based on the positive feedback across all complementary therapies offered within their service overall. For instance, the Warrington and Halton Hospitals NHS Foundation Trust explained the sustained provision of Reiki therapy within the Trust based on their satisfaction with results of an evaluation of their CAM service in its entirety. They stated that: *“[we] undertake patient satisfaction surveys on a yearly basis in regard to the Complementary Therapy Service. The results of that have never been less than 100% positive, but Reiki is not singled out as a stand-alone therapy so there are no Reiki specific results. With a 100% positivity result, it is fair to assume that every user who has had Reiki is completely positive about it”*.

Furthermore, it is worth noting that while 22 Trusts provided responses indicating they had no means to collate physiological outcomes of Reiki, the majority of Trusts (with the exception of two) provided responses indicating limited awareness of the distinction between psychological and physiological outcomes. While previous research has attempted to address the reciprocal relation between biological, physiological and psychological processes in this area (i.e. stress increases cortisol and lowers immune-competence; Wardell & Engebretson, 2001), the overlap adds a degree of ambiguity and points towards the lack of a standardised approach for measuring Reiki's efficacy

In the absence of formal Reiki evaluations within the NHS England, it is evident that the provision of Reiki is not based on a ‘need-to-know’ basis concerning its effectiveness, before actively integrating it alongside conventional care but is predominantly due to patient experience and demand for the therapy. A dearth of service evaluations and lack of standardised instruments to evaluate Reiki could be the possible reason for this, a similar problem encountered by the CTC where research for this Thesis was conducted.

6.5.2 Limitations and future recommendations

The present study ascertained that many ATs are not commissioned to provide CAM therapies. For example, in one response to whether the Trust offered Reiki therapy, it was asserted that: *“You will need to contact all the CCGs, Clinical Commissioning Groups, to ask if they commission it because providers these days can only provide services that the CCGs will fund – i.e. if the CCG wont pay for it, we cant provide it”* (Mid Essex Hospital Services NHS Trust).

Similarly, Worcestershire Acute Hospitals NHS Trust requested that the researcher communicate directly with their CCG: *“May I suggest you may wish to contact the commissioners to understand their rationale for not commissioning or for commissioning such services. Our commissioners are South Worcestershire CCG, Redditch and Bromsgrove CCG and Wyre Forest CCG”*. Future researchers would benefit greatly by contacting CCGs directly as suggested above to collate data on reasons for non-provision of CAM services, specifically Reiki, at a local policy level.

Interestingly, the three MHTs that were contacted in error despite efforts to exclude all but ATs, had reported Reiki provision in their Child and Adolescent Mental Health Service (CAMHS) and acute adult inpatient services. These data indicate the presence of some provision of holistic interventions such as Reiki in MHTs. Regrettably, this was not something that was considered in the first instance and, in retrospect, the findings could have been slightly different if the six MHTs were incorporated in the list of Trusts from whom information was requested.

The use of written communication via FOI requests was a novel and cost-effective method to access a plethora of data within a maximum of 20 days with regards to the provision of Reiki and the extent to which it has been evaluated within the NHS. Research indicates that the actual number of studies accessing data for healthcare research by means of the UK FOI (2001) Act is relatively few (e.g. Griffiths and Dhuffar, 2014; Fowler, Agha, Camm, & Littlejohns, 2013) and to the researcher’s knowledge, this study is the first of its kind within health psychology using the FOI (2001) Act to explore the provision and evaluation of holistic services within the NHS dedicated to enhance the well-being of its patients. The Act has admittedly provided easy access to a large volume of data across all ATs encompassing NHS England, however, there were a number of limitations with the current study and these are considered below.

The use of FOI requests via emailed letters had proven to be effective in accessing data swiftly but the use of electronic mail had some disadvantages. To provide some context, out of the 180 letters sent via email, four Trusts stated that they did not have a record of ever receiving a request from the researcher when an enquiry was made at the end of the statutory time frame. Emails were sent to Trusts in alphabetical order (by Trust name) so there was uncertainty about why some Trusts responded to the request while other Trusts stated they had no record of the request. On contacting the Dorset Healthcare University NHS Foundation Trust, it became evident that their IT department had rejected the incoming email. The Trust responded with a

response to the request for information with urgency and in addition, also added: *“Firstly please accept my apologies, your message was received by our systems, but it was inadvertently picked up by our spam filter and deleted. As a result, our IT department is reviewing our policies to ensure this does not happen again...”* Though the NHS Trust websites explicitly state that FOI requests can be made to their designated addresses either by post or email, it is clear that processes to ensure that incoming emails are received are not in place. A recommendation to future researchers who request information from the NHS is that they should ensure arrangements are in place to contact Trusts that have failed to acknowledge the FOI request within 48 hours. One method would be to track emails given that there are two types of responses that can be obtained from each Trust: (i) automatic confirmation, and/ or (ii) the recipient is asked to click and acknowledge the receipt when the email is first opened.

At the time of writing, the researcher was awaiting a further four responses from Trusts who had acknowledged the failure to respond by their Trust within the statutory time frame because data were either in the process of being collected, pending approval, or an extension was requested to ensure the information provided was generated accurately. Conversely, four Trusts failed to acknowledge the FOI request within 48 hours, did not respond with the requested information within the statutory time frame of 20 days and did not respond to the subsequent follow-up with regards to the failure to comply with the UK FOI Act (2001).

Another limitation of this study is the potential exclusion of other parts of the UK. This study was conducted under a strict timeline and with familiarity of the English NHS system. Future studies should encompass Wales, Northern Ireland, and the Scottish FOI (Scotland) Act, 2002, to see if there are marked differences in the provision of Reiki within the UK as a whole.

6.6 CHAPTER CONCLUSION

This present study indicates that the therapeutic benefits conferred through the delivery of Reiki are firmly grounded within its holistic dimensions of restoring and maintaining wholeness by promoting a more balanced well-being, especially in people living with cancer. This study has highlighted that there are a number of NHS Trusts in England that routinely offer Reiki to patients with cancer alongside their conventional cancer treatment plans with the majority of departments comprising oncology, palliative and EOL care services. Although the rationale for providing Reiki is imbedded within the need for an integrated approach to healthcare, there is still a long way to go before there is a satisfactory level of understanding about its therapeutic capacity to enhance patient experience alongside conventional care plans.

Reiki is currently delivered within the NHS using a variety of different approaches and, in the absence of a consistent approach, it is somewhat difficult to infer what comprises an effective Reiki intervention based on a comparison among Trusts. Furthermore, the absence of adequately designed evaluations conducted to investigate Reiki as a stand-alone therapy means there is the added degree of difficulty in attributing some of the reported benefits to Reiki alone. More robust service evaluations are warranted to assess a 'course of Reiki' separately from the potentially overlapping effects of multiple complementary therapies combined together as 'a course' in some Trusts.

CHAPTER 7

DISCUSSION OF FINDINGS

7.1 CHAPTER INTRODUCTION

This study explored the therapeutic effectiveness of Reiki on a range of health outcomes. To achieve this, an in-house instrument was developed to elicit and analyse data across seven health outcomes from a same-day follow-up to a longer-term follow-up over the period of five weeks. This chapter considers the findings for each outcome separately. Where applicable, the findings from this study are placed in the context of the other cancer centres across England (e.g. the supplementary study in chapter six) or compared with the findings from similar service evaluations evaluating Reiki-specific symptomatic improvements in cancer centres across other countries. The implications of these findings for practice, theory and research are discussed, as well as study limitations.

7.2 SUMMARY OF MAIN FINDINGS

This research resulted from the desire to discover whether the provision of Reiki could be a helpful complementary therapy for the local community of patients attending treatment at the hospital where this study was conducted. In this section, the findings from the baseline with same-day follow-up, and same-day follow-up are discussed in relation to Reiki's effects on the following seven health outcome domains: pain, tension, calmness, anxiety, stress, low mood, and trouble sleeping.

7.2.1 Pain

The baseline assessment and same-day follow-up comparisons indicated statistically significant differences in pain scores. These findings suggest that both in-and-outpatient groups felt symptomatic improvement following the first session of Reiki. While these findings are consistent with the robust studies discussed in chapter two, looking at the effects of Reiki on pain symptoms in cancer, and community dwelling older adults (e.g. Olson et al., 2003; Richeson et al., 2010), it was deemed more appropriate to compare the findings from this study to those with comparable designs (i.e. program evaluations). The improvement in pain scores found in this study are in line with the more recently conducted service evaluations from other cancer centres (e.g. Berger, Tavares, & Berger, 2013; Birocco et al., 2012; Fleisher et al., 2014; Marcus, Blazek-O'Neill, & Kopar, 2012; Rosenbaum & Van De Velde, 2015, Vandergrift, 2013;). Additional exploratory analyses of the longer-term follow-up data for the outpatient group revealed a cumulative effect, with a higher number of participants reporting that Reiki helped with their pain 'quite a bit' or 'very much' by week five. However, in line with other studies (Birocco et al., 2012; Olson et al., 2003), it is not possible to rule out the possibility that the pain data might have been confounded by other factors; for example, beneficial changes over the five-week intervention period might have been due to an improvement in pain control as a result of the medication administered as part of patients' conventional treatment plans. A study by Birocco and colleagues (2012) looking at the effects of Reiki on pain in patients attending a day oncology and infusion services unit observed significant before-and-after changes in the mean Visual Analogue Scale (VAS) pain scores after the first, second, and third Reiki treatments, but not the fourth. The findings of this study identified that the interaction of time, and therefore the level of incremental change in the duration that Reiki was able to provide symptomatic relief, was constant over five weeks; participants were consistent in reporting that Reiki helped with their pain for 'a few days' to

‘up to one week’ across both time-points however, it is unknown whether these effects lasted longer than one week. A study by Tsang et al., (2007) has demonstrated that the beneficial effects of Reiki on pain symptoms results in respite that is maintained for ‘at least’ one week after five sessions of Reiki, however the authors of the study suggested that a washout period longer than 7-days is needed to get a better estimate of the duration of these effects.

7.2.2 Tension

The findings demonstrated a significant improvement in tension before-and-after the first session of Reiki in both patient groups, a finding already reflected in literature related to tension/ muscle stiffness in cancer patients (e.g. Maza Muela, Chao Lozano, & Sánchez, 2010; Wardell & Engebretson, 2001). However, benefits of Reiki were perhaps harder to anticipate over the course of the five-week intervention. Despite a continued benefit observed (i.e. Reiki helped relieve tension ‘quite a bit’/ ‘very much’) for Reiki to alleviate tension, a drop in the number of participants who reported that Reiki helped relieve tension for a ‘few days’/ ‘up to one week’ indicated that the effects were not sustained over the course of the five weeks. A service evaluation by Berger et al., (2013) evaluated the effects of Reiki on reported symptoms of stiffness but despite finding symptomatic improvement, it was not possible to attribute these findings to Reiki alone among the other CAM therapies offered. To the researcher’s knowledge, few studies have evaluated the effects of Reiki on tension/ muscle stiffness.

7.2.3 Calmness

There has been much anecdotal evidence that Reiki has the potential to create a profound state of calmness, however, the information in the literature related to such effects is insufficient to surmise Reiki has a direct effect on bringing a sense of calmness in patients. A study of the literature points towards findings that attribute the effects to numerous other psychological states that are altered (e.g. inducing a relaxation response from reducing symptoms of anxiety, stress, tension; London Cancer Alliance [LCA]; 2016; Wardell & Engebretson, 2001), thereby facilitating the resulting calming effect. Although reasons, why participants felt calm, were not established during this study, the findings from this study did indicate that perceived benefits of Reiki on calmness had reached a 100 per cent of participants feeling ‘quite a bit’/ ‘very much’ calm by week-five of the intervention. The most recent findings from a qualitative study by Kirschbaum, Stead, and Bartys (2016) exploring Reiki experiences in a cohort of breast cancer patients, demonstrated that women associated Reiki with a sense of calm and

peace, a finding also reflected in this study, other evaluations (e.g. LCA, 2016), and anecdotal evidence/ patient satisfaction surveys from a number of NHS Trusts in England (see chapter seven).

7.2.4 Anxiety

A significant reduction in anxiety was found after the first session of Reiki in both in-and-out patient groups. This finding implies that participants felt symptomatic improvement after just a single session of Reiki, a finding also reflected in a study by Wardell and Engebretson (2001). The authors of this study discovered Reiki's capacity to alter the biochemical and physiological correlates of relaxation (i.e. lowering of the stress response) leading to a reduction in anxiety and thus, demonstrating the coexistence of several factors involved in the overall healing process. This improvement in anxiety found in this study is also in line with a number of similar service evaluations that have been conducted recently (e.g. Berger et al., 2013; Birocco et al., 2012; Fleisher et al., 2014; Marcus et al., 2012; Vandergrift, 2013). Furthermore, a complementary therapies service evaluation by the LCA (2016) found Reiki's benefits among several CAM modalities, to be of most benefit for attenuating symptoms of anxiety than fatigue, pain, relaxation or stress.

This study also found that the longer-term effects of Reiki over the five-week intervention period (i.e. the number of participants who felt Reiki was 'quite a bit' / 'very much' beneficial) remained constant over the course of the intervention. Participants reported feelings of symptomatic relief lasting a 'few days' / 'up to one week' at the week two and five follow-up time-points. Previous research by Tsang et al., (2007) demonstrated that the effects of five sessions of Reiki could provide relief from anxiety for up to seven days. The surveys designed for the purpose of this study did not inquire about Reiki's effects beyond one week at the weeks two and five follow-up time-points, and this restriction should be noted as a limitation that could have influenced the overall findings.

7.2.5 Stress

On the whole, the findings from this study support those of other studies demonstrating the significant effects of Reiki on stress symptoms from a single session of Reiki (e.g. Marcus et al., 2012; Rosenbaum et al., 2015; Vandergrift, 2013), to over the course of a longer-term intervention (e.g. Bowden, 2010; Shore, 2004). These finding may also be able to facilitate a

better understanding with regards to the beneficial changes found for anxiety and tension in this study. The conceptual framework of relaxation and stress reduction by Wardell & Engebretson (2001) provides a rationale for the argument that the beneficial change observed in anxiety and tension might be the follow-on effects of Reiki on stress thus, making it difficult to attribute a change in symptoms on any of these health outcomes specifically to Reiki alone. The apparent benefits could be better understood in terms of the cognitive (i.e. anxiety) and somatic (i.e. tension) effects of stress; suggesting corresponding symptomatic improvements could be the result of the intertwined process between a number of biochemical and psychosocial factors (Wardell & Engebretson, 2001).

7.2.6 Low mood

Low mood is recognised as a core symptom that is connected with or manifests as depressive and stress-related disorders (American Psychiatric Association, 2013). Symptoms of low mood are generally those that will tend to lift within a few days or weeks however, if low mood does persist for longer, it could also be a symptom of depression (NHS Choices, 2016) – a common emotional response to a diagnosis of cancer (or relapse) (National Cancer Institute, 2016). This study found that low mood had the second largest incremental change (after pain) suggesting a potential cumulative benefit from Reiki over the course of the five-week intervention (an improvement in low mood in 72% of participants at Time1 to 84% by Time2), with Reiki's effects on low mood sustained for a few days to a week for the majority of participants. The positive shift from the effects of Reiki indicated in this study is consistent with the findings from more robust studies (e.g. Bowden et al., 2010), and other Reiki service evaluations (Berger et al., 2013; Marcus et al., 2012; Rosenbaum et al., 2015).

7.2.7 Trouble sleeping

Evidence of the relative merits of Reiki for alleviating troubled sleeping is relatively limited in the scientific literature. The findings from this study demonstrated a significant reduction in 'trouble sleeping' before-and-after the first session of Reiki in both patient groups. The longer-term follow-up data in the outpatient group indicated a cumulative increase in the level of perceived benefit of Reiki on alleviating troubled sleeping over the five-week period, a finding replicated by Marcus et al., (2012). A qualitative study by Kirschbaum et al., (2016) looking at Reiki experiences of women with cancer had also found an improvement in sleep among this group. Improved sleep was also a common theme among patient experiences

reported across other NHS Trusts also (see chapter seven). Conversely, an earlier study by Bowden (2010) found no significant effects of Reiki on sleep quality using the Pittsburgh Sleep Quality Index. However, the same measure found an increased tendency towards the Reiki group being more tired after the intervention than its start. Further studies in this area are needed.

7.2.8 Exploring the magnitude of Reiki's effects with severity of illness

It was discussed in chapter three that the in-and-outpatient groups differed in their severity of illness with outpatients generally having better QOL than inpatients. Effect sizes were reported as an estimation of Reiki's magnitude of effect, and to enable a comparison of its therapeutic efficacy in both groups on six health outcomes. Although Reiki's same-day effects were found to be statistically significant across all health outcomes (i.e. observed outcomes not due to chance) in both groups, effect sizes were able to help gauge whether severity of illness was an important factor that might confound estimation of Reiki's therapeutic benefit. Effect sizes were therefore expected to provide a better estimation of whether an individual with a severe or milder form of illness was likely to respond to Reiki in the same way. In quantifying the size of the differences or magnitude of effect in symptom improvements following Reiki, differences were found between both groups. Estimates of benefit following Reiki indicate better therapeutic efficacy for outpatients across four out of the six outcomes than their severely ill counterparts. For example, Reiki had a larger (or stronger) effect on improvements in symptoms of tension, calmness, and anxiety for outpatients, compared to the medium (or moderate) effects in inpatients. Reiki was found to have a small (or weak) effect on improving symptoms of low mood for inpatients, but a large effect was detected for outpatients. No differences in the magnitude of Reiki's therapeutic benefit were observed for pain (medium effects) and stress (large effects) in both groups.

The findings from the literature review (chapter 2) found that Reiki was more beneficial for those who had higher illness symptoms at baseline (e.g. Beard et al., 2011; Bowden et al., 2010) suggesting the significance of Reiki's individualistic response to therapy. In contrast, the findings from this study suggest patients with lower severity of illness responded to Reiki's (short-term) benefits better than individuals with greater illness severity. Although the findings provide the invaluable insight that Reiki might be able to have medium to large effects on health outcomes in both groups, it is not clear whether Reiki's therapeutic efficacy is

confounded by severity of illness based on the findings of this study alone. Larger magnitudes of effect were found in patients who were lower in severity than those who were higher but these findings remain inconclusive and further research is required to understand Reiki's magnitude of difference in benefits as a complementary treatment or intervention in both groups of cancer patients.

7.2.9 Apprehension, perceived helpfulness, and symptomatic improvement

Participants were asked about their feelings of apprehensiveness about having Reiki for the first time at the baseline visit to ascertain the impact of negative emotion on outcome effects. However, no relationships were identified between baseline apprehension and symptomatic improvement at follow-up. Participants were also asked whether they thought Reiki would be helpful at baseline to ascertain whether treatment beliefs (expectation effects) were likely to impact Reiki's perceived effectiveness (observed through symptomatic improvement) at follow-up. The findings indicated a moderate, positive correlation between Reiki's perceived helpfulness at baseline and symptomatic improvements in tension and calmness by Time2 follow-up in the outpatient group. The findings demonstrate a positive association suggesting higher levels of perceived helpfulness/ or expectation at baseline was associated with higher symptomatic relief/ or therapeutic benefit in these two outcomes. As correlations only reflect an association, these findings could provide an interesting basis for further research to explore the effects of expectancy on Reiki's perceived benefit, specifically on tension and calmness.

Furthermore, significant inter-correlations were found among health outcomes suggesting benefits on one outcome were associated with benefits on a second outcome. For example, stress at the Time1 follow-up had positive associations with tension, calmness, and low mood. Strong positive associations were also found at the Time2 follow-up between low mood with stress; anxiety with tension and calmness; and stress with tension, calmness, and anxiety. These findings present an interesting opportunity to explore whether these associations reflect the possibility of improvements in one outcome with concealed benefits that might help ameliorate symptoms/ alter psychological state on a secondary outcome.

7.3 LIMITATIONS OF THIS RESEARCH

Interpreting the data is limited by the design of this study, and a number of issues require further consideration.

(i) The decision to use a non-random based sampling strategy (convenience sampling) was defined around the site-specific service evaluation, and in line with the exploratory nature of this study. The outpatient sample was selected at their first visit to access cancer support services including CAM therapies offered at the CSC. Accordingly, therapists would have suggested Reiki as applicable based on the patients' concerns before offering it. One of the limitations of this study was that the findings might have been confounded by patients' motivation to participate; a placebo effect could be attributed to the positive expectations (e.g. a hope for symptomatic relief).

(ii) Furthermore, the use of a convenience sampling strategy had prevented a thorough exploration of gender differences in this study. For example, two recent reviews indicate that CAM utilisation is more common among women (e.g. Eardley et al., 2012; Frass, Strassl, Friehs, Müllner, Kundi, & Kaye, 2012), and although it was noted that both in-and-out patient groups in this study comprised predominantly of women with breast cancer, it was difficult to distinguish whether this was due to women expressing a higher interest to receive Reiki, or due to the opportunity based sampling strategy used to select participants (based on accessibility, availability, and willingness to participate).

(iii) Another limitation that requires consideration is the lack of a measurement tool with established psychometric properties. In the absence of a Reiki-specific questionnaire, an in-house instrument comprising four surveys was developed to enable data collection for the Reiki evaluation. The work completed in this Thesis was at an exploratory level with an initial intention to identify whether benefits from Reiki existed and whether these perceived benefits were measurable. It is not known how the measurement tools were developed to evaluate Reiki interventions in other studies reviewed in this chapter, however; this study advocates a mixed-method approach to incorporate focus group interviews with service users at the CTC to develop specific domains/ items that could be evaluated as part of subsequent Reiki studies. Additionally, a QOL measure that taps into the physical, psychological, social and spiritual well-being domains could be incorporated as part of future endeavours. Using the same measure across different time intervals could provide insight into the effect of the illness on

the patients' QOL at baseline, while the same measure administered at various time-points could facilitate an understanding of the cumulative effect of Reiki therapy specific to these domains, something that was not possible using the in-house measure in this study.

7.4 IMPLICATIONS FOR PRACTICE

This exploratory study demonstrated a consistent pattern across the six health outcomes pointing to Reiki's benefits and providing support for its inclusion alongside conventional cancer treatment plans. Participants reported symptomatic improvements in pain, tension, calmness, anxiety, stress, low mood, and trouble sleeping, demonstrating that Reiki provided relief across a broad range of cancer-related symptoms. In line with earlier studies (e.g. Tsang et al., 2007), the findings indicate that improvement in symptoms lasted up to one week for the majority of people. Despite the tentative nature of these findings, a number of implications can be identified from this service evaluation.

(i) Findings from this study indicate that Reiki was able to induce symptomatic relief for very ill inpatients in the CTC ward and for those attending day outpatient services by making their stay less stressful and more acceptable. Notable changes observed over the five-week intervention time-frame demonstrate that patients who are likely to experience pain, low mood, trouble sleeping, diminished levels of calmness, tension, stress and anxiety would benefit from Reiki, and should be encouraged to use it to complement their conventional treatment plans. Prominent physical sensations evoked during patients' experiences of Reiki were feelings of warmth, relaxation, elevated energy, and calmness. These findings provide the CSC staff, the oncologists at the CTC, and other healthcare professionals with the knowledge and confidence to direct their patients to Reiki therapy, among other CAM therapies, while having cancer treatment on or off-site.

(ii) This service evaluation demonstrates that teams/ services (i.e. cancer ward nurses, therapists, CTC management, health psychologists, and other members of the research team) can work together to provide a holistic and integrated healthcare approach to cancer patients who are the direct beneficiaries of complementary therapies like Reiki.

(iii) Finally, one recommendation that can be made for improving local policy at an organisational level is in relation to mental health. Findings from this, and the supplementary study (see chapter seven) point towards a high preference for Reiki at a local community and

national NHS level for numerous reasons. Integration of Reiki therapy as part of CAM services within cancer centres can enable patients to become self-reliant in health matters (i.e. The CAM Healthcare model; Fouladbakhsh & Stommel, 2007) with the longer-term benefit of being able to reduce some of the mental health issues associated with cancer, and the resulting burden these issues can place on the healthcare system. The positive response in relation to patient experiences of Reiki from both patients at the CSC, other cancer centres and Mental Health Trusts across England indicate that the provision of Reiki could help prevent symptom burden, promote better psychological adjustment, and help foster a more health conscious individual who is given an opportunity to take control of their mental, emotional and spiritual needs.

7.5 IMPLICATIONS FOR THEORY

Historically the study of disease in Western countries has used the dominant approach of the biomedical model, which has disregarded the active role of psychological processes involved in health and illness (Engel, 1977). The biomedical framework still predominates much of the work done within the NHS in the UK, where evidence-based medicine prevails over the psychosocial needs of cancer patients. Patients are offered a wealth of information in regards to the biological effects, but very little emphasis is placed on the psychological impact of cancer and its treatment related side effects (e.g. stress caused by the illness; Maly, Umezawa, Leake, & Silliman, 2005). This current study adopted a pragmatic approach rather than theoretical stance to understand patients' subjective experiences of Reiki using patient reported outcomes (establishing reasons for further investigation). Despite the tentative nature of the findings, this study highlighted the need to integrate a holistic approach to studying the physical, emotional and spiritual needs of cancer patients, where Reiki has its place. Evidence based approaches to research (e.g. RCTs) do not extend as far as translating subjective experiences from Reiki's Eastern ideology that encompasses promoting harmony in the 'person as a whole'. Given the highly subjective nature of patient experiences from Reiki, its therapeutic efficacy might be better understood in terms of individualised responses to treatment (therapy).

In the absence of an adequate understanding of Reiki's mechanism of action, the findings of this study have highlighted the importance of understanding patient experiences from a range of explanatory perspectives (i.e. biological, psychological and social) as part of a holistic care paradigm. Findings from the supplementary study indicate a patient preference for Reiki is

common across many cancer centres. Thus future work among other cancer centres/ Trusts could investigate its therapeutic role using in-depth interviews to build an understanding of anecdotal reports of psychological benefits from Reiki (e.g. *“makes me feel supported and understood”*; *“it is the only time anyone at the hospital has asked how I am feeling about my illness and how I am coping”* with physiological reports, e.g. *“improved circulation”*; *“drop in blood sugar levels”*; *“significant less hot flushes and night sweats”*) to gain an in-depth understanding of the complex interaction between biological, psychological and social aspects of illness.

7.6 IMPLICATIONS FOR INTER-DISCIPLINARY RESEARCH

Integrating a more holistic approach to medicine (i.e. the biopsychosocial model; Engel, 1977) relates to the wider aims of the health psychology discipline where health can be understood from a broader psychosocial dimension (Marks, Murray, Evans, Willig, Woodall, & Sykes, 2005). Following greater awareness of the need for a holistic approach to cancer-related care, the interdisciplinary field of psycho-oncology has emerged combining two disciplines, one of which is health psychology (the other is psychosomatic medicine) to study cancer using a more integrated approach (Hoge & Roth, 2015). Psycho-oncology places emphasis not only on the treatment of the biological disease, but also the psychological, social, emotional and spiritual aspects associated with cancer and its treatment equally. Both disciplines working together could develop a better understanding of the therapeutic role of Reiki, and other CAM therapies offered to enhance cancer survivors' health and well-being. There is a need to develop health policies that integrate supportive strategies into mainstream medicine, and it is hoped that this research will prompt a more interdisciplinary approach within the NHS in implementing provisions of therapeutic interventions to people with cancer.

7.7 CHAPTER CONCLUSION

Findings presented in this study suggest that Reiki can provide both short and longer-term respite across a number of health outcomes. Furthermore, these findings are consistent with findings from similar Reiki service evaluations involving patients with cancer, as well as more robust studies using RCT designs, conducted in the UK and other countries. Reiki shows potential to enhance the overall experience in in-and-outpatients at the CTC and its sustained provision can positively enhance the portfolio of complementary therapies offered at the CSC.

Despite the exploratory nature and limitations of this study, it has demonstrated that it is feasible to evaluate the effects of Reiki in this local community of patients. The work undertaken has highlighted some of the logistics (i.e. planning, preparation and need for funding) that require consideration for subsequent studies at the CSC. The next chapter concludes this Thesis with some of the main findings in relation to the study aims, the practice-based implications of the study findings, and puts forward recommendations for further research and future practice.

CHAPTER 8

FINAL CONCLUSIONS AND RECOMMENDATIONS

8.1 A REIKI EFFECTIVENESS EVALUATION RESEARCH NEED

The Reiki intervention evaluated in this Thesis explored the therapeutic effectiveness of a newly introduced therapy to enhance the provision of a holistic complementary care package to cancer patients attending treatment at the CTC. At its inception, not a great deal was known about its benefits thus, emphasising the need for an evaluation. Determining whether to continue implementing Reiki was based on the needs of the local community of cancer patients at the hospital, but funding the long-term provision of a therapy that might be considered non-essential made very little sense. The therapies offered at the CSC are: (i) explained to patients seeking complementary care alongside their conventional treatment programme, (ii) demonstrated as applicable, specific to patients' concerns, (iii) and then offered. The anecdotal patient narratives (i.e. patient-to-therapist during a therapy session) enabled some understanding that cancer patients at the CSC had a preference for Reiki compared to other therapies comprising the CAM care package. A plethora of studies and reviews were examined to form an adequate understanding of the role of Reiki in cancer care. Seven RCT design studies demonstrated Reiki's effectiveness on a number of cancer-related health outcomes between 2002-2012 (see chapter two). However, a lack of published service evaluation findings at that time highlighted the limited nature by which Reiki might have been provided, practiced and formally evaluated within the NHS. In the absence of an understanding of patient preference for Reiki in other UK-based cancer centres, this service evaluation study was undertaken to identify benefits of Reiki specifically for the local community of patients and to facilitate a better understanding about integrating it into the portfolio of CAM therapies offered at the CSC to enhance patient experience. The choice to carry out an exploratory study was to develop an adequate understanding not only in relation to Reiki's therapeutic effects on patients with cancer but to determine whether there was a need to conduct a more advanced investigation beyond an exploratory level. This study provided useful insight into individualised responses to Reiki therapy and the need to encompass a personalised approach to understanding some of its therapeutic benefits.

A more recent supplementary study conducted by the researcher to evaluate whether Reiki service evaluations within the English NHS have been conducted (see chapter six) since this study was completed, indicates that formal Reiki service evaluations continue to remain sparse. While the data collected from this supplementary study suggest that cancer departments within the NHS support the provision of Reiki, it did draw attention to the need for more Reiki specific evaluations as the majority of Trusts reported treating patients with more than one therapy. An evaluation of CAM therapies incorporating, but not specific to Reiki, makes it difficult to attribute symptom changes to Reiki alone. It is recommended that other cancer centres/ Trusts intending to conduct a Reiki service evaluation do so as part of an individualised course of therapy, similar to the one in this study. Furthermore, this study has also shown that it is feasible to develop an in-house instrument to evaluate the effects of Reiki. Service evaluations will often produce outcomes that are specific to certain clinical populations, however, the findings from this study could be used to set the scene for future projects at the CSC, and form basic groundwork for other cancer centres in the UK intending to develop an in-house measure to explore the benefits from Reiki. This study among others (e.g. Berger et al., 2013; Birocco et al., 2012; Fleisher et al., 2014; Marcus et al., 2012) advocate the use of surveys as a patient-centred approach to understanding the ‘person as whole’ by translating some of the idiosyncratic therapeutic benefits from Reiki in patients with cancer.

8.2 EVALUATION OF THE STUDY FINDINGS

This study sought to evaluate Reiki by examining outcomes that could potentially benefit from Reiki in people with cancer and also comparing such outcomes with those achieved by other services within NHS England (findings from the supplementary study). This current study found tentative signs that Reiki might have short-term benefits that could provide respite from symptoms of pain, tension, calmness, anxiety, stress, low mood and troubled sleep. The findings from this study despite their tentative nature substantiate Reiki as a potentially useful therapy that could benefit patients as a complement to their conventional cancer treatment plans. Although the findings of this study should be interpreted carefully in the first instance; the indication of positive outcomes from users of Reiki at the CSC could be used as a footprint to examine Reiki in this population of users using more rigorous/ robust study methods and materials. While this Reiki service evaluation was conducted in the absence of any prior knowledge of similar types of service evaluations conducted in England around the period of

2010 to 2013, the results from the recent supplementary study indicate similarities with achieved outcomes from other services within NHS England. However, in light of the methodological limitations of this study as outlined in the previous chapter (see section 7.3 in chapter seven), the present findings concerning Reiki's benefits remain open to discussion, particularly in light of other studies published outside of the NHS since the completion of this Reiki evaluation at the CSC. More recent studies in the USA (e.g. Fleisher et al., 2014; Marcus et al., 2012; Vandergrift, 2013), Canada (e.g. Berger et al., 2013), and Italy (e.g. Birocco et al., 2012) have not only attributed significant symptomatic benefits to Reiki but also shown its success as a holistic complement alongside patients' conventional cancer treatment plans.

8.3 PRACTICE-BASED IMPLICATIONS OF STUDY FINDINGS

Since the completion of this study, the Reiki therapists have been invited to deliver Reiki across various other wards indicating that Reiki has been generally well-received within the hospital with a number of departments and healthcare professionals progressively approving of its provision. In terms of the practice-based implications, this study has been the catalyst for beginning the process of redirecting ongoing discussions to incorporate the involvement of other healthcare professionals within the cancer treatment centre, where possible, and therefore positively impact the wider clinical implications with respect to improving the ultimate impact of treatment provided within the hospital. Although the immediate application of these findings should be taken with caution, they have served to aid local-level decision making by offering enough support to carry-over and continue the provision of Reiki as part of the portfolio of CAM therapies, while time and resources are strengthened to assist further investigation in the near future. In the interim, the collated evidence from this study has been developed into an updated proposal as part of a larger all-inclusive CAM service evaluation model by the CSC, presented to the local NHS R&D department, and used to generate an interest to gain funding as part of a strategic plan to develop health research within the CSC and across the Trust.

There were several other reasons that triggered this study alongside an evaluation whether Reiki was considered beneficial to patients. One other motivation for this study was to enable an exploration of several practical aspects of conducting research, including testing the recruitment procedures to determine the feasibility of conducting Reiki research with both in-and-outpatient groups. Although this study did show that it is possible to develop the portfolio

of CAM therapies within the context of an evaluation of the service, there are some limitations and practical issues that require consideration. For example, this study had failed to consider any impact of unit non-responses on the overall results. However, the CSC understand that this is an issue that needs to be closely addressed as part of plans for future research, especially because there is only a relatively small community of patients receiving treatment at the hospital's CTC, who also elect to receive CAM services offered by the CSC. Although the findings of this study are subject to change in light of new evidence or new interpretation going forward, the current data provide a useful framework as a baseline for benchmarking future Reiki research at the CSC. Recommendations for other researchers as a result of the findings from this study, and in line with identifying some of the issues that had arisen from the Reiki evaluation have also been considered below.

8.4 RECOMMENDATIONS FOR FUTURE RESEARCH

It was mentioned earlier that there were several reasons for evaluating Reiki. The research conducted for this study aimed to identify Reiki's benefit on the local community however, there were some real-world constraints (i.e. local level policy and political context) affecting the study design. The research was therefore conducted with practicality and feasibility in mind, within the confines of time and resources. The methodology comprised ways of systematically collecting data that was accurate as well as useful, in the first instance, to stakeholders who would be essentially funding Reiki's long-term provision within the Trust. The objectives of this 'stake-holder controlled evaluation' of Reiki's benefits to the local community were designed with some carefully planned objectives to identify whether Reiki positively impacted some of the wider clinical implications. The research work was completed as part of a collaborative effort and the researcher's role within this partnership entailed making a contribution to the overall body of knowledge, develop suitable ways of addressing some of the current issues (i.e. does Reiki work?), collect data, use scientific methods to analyse data, and monitor the evaluation process creating a foundation for future Reiki research within the CSC. As the findings were to assist with making a balanced assessment and maximising comprehension of Reiki's benefits, establishing its plausible mechanisms (i.e. how does Reiki work?) was considered of secondary importance at this stage. The study was therefore confined to a research methodology that was philosophically limited by competing ideologies concerning the best way to measure Reiki's effects (i.e. positivist/ quantitative methods). While this study was not expected to cover every aspect of a thorough investigation,

it provided a basis for confirming a need for further exploration of Reiki at a more individual level. Moreover, the findings from this study and the supplementary study, have helped to ascertain that there is a need to reconsider research methodologies when evaluating the effectiveness of CAM therapies given their subjectivity. While the findings have helped address some of the initial queries pertaining to Reiki's impact, it can be suggested that the use of a more naturalistic research method using qualitative methods would be beneficial, if integrated, to create an effective enquiry paradigm to generate holistic data exploring the subjective experiences of using Reiki, and enhance understanding of its effects among this group of users. In the context of medicalised institutions such as the one where this current Reiki evaluation was conducted, a mixed-methods approach could benefit in terms of obtaining data that is cross-verified from different sources and methods (i.e. triangulation), if warranted. Here, qualitative methods could be employed as a complement to quantitative research, as a means of exploring a subject incorporating an analysis of individual factors, some of which might not be accessible using only quantitative methods alone (e.g. Pope & Mays, 1995). So far, anecdotal evidence concerning Reiki's beneficial effects has commonly described the experience as one that induces deep relaxation with profound reductions in symptoms of anxiety, pain, and stress (Burden et al., 2005). A vital step in future research would be to investigate and provide insight into people's experience of Reiki in relation to their illness and treatment-related side-effects using Interpretative Phenomenological Analysis (IPA). Given that the cost of providing a Reiki service warrants an evaluation against its benefits, the findings using IPA could give an insight into the meaning of personal experiences, particularly in relation to Reiki's benefits for cancer-related symptoms (versus objective accounts through quantitative measures such as surveys) (e.g. Cartwright, 2007). The use of patient narratives could help to elicit positive and negative experiences concerning holistic therapies to facilitate a clearer understanding of the healing process that is unique to each individual (Van Wersh et al., 2009). However, it is also important to note with regards to qualitative and quantitative methods, that the strength of one method does not reflect the weakness of the other, such that, neither are better or worse, but could be used to effectively complement each other when trying to understand social phenomena. In this sense, researchers might benefit from an approach that is able to focus on the role of human consciousness to explicate essential meaning of illness experiences, and views about Reiki within a more natural context (rather than experimental).

8.5 FINAL REFLECTIONS

8.5.1 Epistemological and methodological reflexivity

This study has helped the researcher to understand how principles of scientific research can be influenced by the philosophy of scientific paradigms, that science is a set of assumptions which evolve over a period of time. In locating this study within the post-positivist paradigm, the researcher recognised the role of cultural and social perspectives (i.e. the context) as a framework for interpreting the role of subjectivity in experiences of Reiki as an important factor. As a result of this study, the researcher has been able to exercise intellect to process some philosophical thoughts regarding research paradigms; that scientific knowledge is fundamentally embedded within paradigms that are relative by nature, rather than absolute. In this sense, society and culture undergo a process of endless transformations together, shaping and reshaping the ways in which humans interact with their surrounding world. Here, cultural guidelines are inherited from a society within which an individual belongs to (e.g. cultural world-views as a ‘lens’; Kuhn, 1970), subsequently determining how individuals perceive and experience their world, physically and emotionally. Subjectivity is, therefore, an innate characteristic that is formed through countless interactions within society, while culture shapes how different individuals live through similar experiences. While the researcher has become more reflexive and understands that all knowledge systems are of equal importance and validity; some of the restorative benefits of Reiki that have emerged from the ‘word clouds’ (physical sensations and emotions felt during Reiki; p. 104-105 and supplementary study; p. 117-118) reflect the relative idiosyncratic uniqueness of Reiki’s experience. Thus, it would be useful to explore their meaning (i.e. at a physical, emotional, mental and spiritual level) using a qualitative methodology. As mentioned previously, the researcher had little involvement on the choice of methodology in this service evaluation. However, the preliminary findings from the surveys used in this study highlight the need to explore a bigger reality by focusing on how different individuals live through similar experiences. The researcher recognises this research need as the first step in starting to construct an integrated holistic picture among this group of users as something that is important to research further.

8.5.2 Personal reflexivity

The researcher feels extremely grateful to have been given the opportunity to be part of the preliminary stages of an early investigation assessing the effects of Reiki on the local community at the hospital where this study was conducted, and where the researcher was a practicing Health Psychologist. During this project, the researcher was able to provide some knowledge base and be able to actively practice within the realms of their passion in community-based Health Psychology, specifically concerning the maintenance of health and well-being with emphasis on promoting change to create ‘healthy communities’, the improvement of health care systems, and the formulation of health policy. This project was an opportunity for collective action within a space where various different disciplines had come together to meet (e.g. Pope, 1992) to identify and improve the health care needs of their local community. At the time of commencing with the study, the researcher had limited knowledge about Reiki therapy but with time and perspective, the importance of maintaining an open mind has become rather apparent. To sum up the whole process, it has been a thoroughly interesting area to explore, challenging at other times, but nevertheless incredibly enjoyable, and rewarding.

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APPENDICES

LIST OF APPENDICES

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Appendix A

Author, year	Bowden et al., 2009	Catlin et al., 2011	Potter, 2007	Beard et al., 2011	Olson et al., 2003	Richeson et al., 2010	Shore, 2004	Mackay et al., 2004	Tsang et al., 2007
<i>Score point [1]</i>									
Was the study described as randomised?	X	X	X	X	X	X	X	X	X
Was the participant blinded to the intervention?	X	X					X	X	
Was there a description of withdrawals and dropouts?	X		X	X	X	X			X
<i>Score point [+1]</i>									
Was the appropriate method to generate the sequence of randomisation used?	X	X	X	X	X	X			
Was the assessor blinded to the intervention?		X	X				X		
Jadad score	4	4	4	3	3	3	3	2	2

Appendix B

Survey	Visit number									
	1		2 (Time1)		3		4		5 (Time2)	
	Before	After	Before	After	Before	After	Before	After	Before	After
Health Profile/ Ward Referral Form [Before Reiki]	X									
Survey 1 (Q1) Baseline Assessment [pre- session 1]	X	X								
Survey 2 (Q2) Same day follow up [Immediately post session 1]		X X								
Survey 3 (Q3) Longer term follow-up [pre-sessions 2 & 5]			X						X	
Survey 4 (Q4) Exit survey [post-session 5]										X

X = CSC - Outpatients

X = CTC - Inpatients

Appendix C

Reiki Pilot Survey

We are interested in how you feel before your Reiki therapy session

Please answer all of the questions. There are no 'right' or 'wrong' answers. Your answers will be kept confidential. Thank you for your participation.

Your Name:

Date:

Before Reiki:

Please tick the box below which best represents how you feel before Reiki.

		Not at all	A little	Quite a bit	Very much
Q1	Do you feel apprehensive about having Reiki the first time?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q2	Do you think Reiki will be helpful?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q3	Do you have any difficulty sleeping?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Using the scale ranging from 0 to 10, please circle the correct answer which best conveys how you feel right now, with 1 being 'feeling the best' and 10 being 'feeling the worst'.

		Best		Worst
Q4	Are you in any pain?	No Pain	0 1 2 3 4 5 6 7 8 9 10	Unbearable Pain
Q5	Do you have any tension in your body?	No Tension	0 1 2 3 4 5 6 7 8 9 10	Very Tense
Q6	Do you feel calm?	Very Calm	0 1 2 3 4 5 6 7 8 9 10	Not Calm
Q7	Do you feel anxious?	Not Anxious	0 1 2 3 4 5 6 7 8 9 10	Very Anxious
Q8	Do you feel stressed?	Not Stressed	0 1 2 3 4 5 6 7 8 9 10	Very Stressed
Q9	Do you feel low in mood?	Not Low in Mood	0 1 2 3 4 5 6 7 8 9 10	Very Low in Mood

Thank you for completing this form. Please place the form in the envelope provided and put the sealed envelope into the drop box on your way out.

Q1: Baseline Measure Pre Session 1

Appendix D

Reiki Pilot Survey

Please complete these questions immediately after your Reiki

Please answer all of the questions. There are no 'right' or 'wrong' answers. Your answers will be kept confidential. Thank you for your participation.

During Reiki:

Please tick the box below which best represents how you felt during Reiki.

Q10 Did you feel physically comfortable? Yes ☐ No ☐

After Reiki:

Using the scale ranging from 0 to 10, please circle the correct answer which best conveys how you feel right now, with 1 being 'feeling the best' and 10 being 'feeling the worst'.

		Best														Worst
Q11	Are you in any pain?	No Pain	0	1	2	3	4	5	6	7	8	9	10	Unbearable Pain		
Q12	Do you have any tension in the body?	No Tension	0	1	2	3	4	5	6	7	8	9	10	Very Tense		
Q13	Do you feel calm?	Very Calm	0	1	2	3	4	5	6	7	8	9	10	Not Calm		
Q14	Do you feel anxious?	Not Anxious	0	1	2	3	4	5	6	7	8	9	10	Very Anxious		
Q15	Do you feel stressed?	Not Stressed	0	1	2	3	4	5	6	7	8	9	10	Very Stressed		
Q16	Do you feel low in mood?	Not Low in Mood	0	1	2	3	4	5	6	7	8	9	10	Very Low in Mood		

Thank you for completing this form. Please place the form in the envelope provided and put the sealed envelope into the drop box on your way out.

Q2: Same Day Follow Up Measure Post Session 1

Appendix E

Reiki Pilot Study We are interested in how you felt after your previous Reiki therapy session

Please answer all of the questions. There are no 'right' or 'wrong' answers. Your answers will be kept confidential. Thank you for your participation.

Your Name:

Date:

Please tick the boxes below which best represent how you felt after your previous Reiki therapy session for each category.

Sleeping

Q17	Did you have any trouble sleeping before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q18	Did Reiki help you to sleep?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q19	If Reiki helped you to sleep, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Pain

Q20	Were you experiencing any pain before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q21	Did Reiki help you with your pain?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q22	If Reiki helped with your pain, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Tension

Q23	Were you experiencing tension in your body before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q24	Did Reiki help relieve the tension?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q25	If Reiki helped with your tension, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Calmness

Q26	Were you feeling calm before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q27	Did Reiki help you feel calm?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q28	If Reiki helped you feel calm, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Anxiety

Q29	Were you feeling anxious before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q30	Did Reiki help you feel less anxious?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q31	If Reiki helped you feel less anxious, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Stress

Q32	Were you feeling stressed before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q33	Did Reiki help you feel less stressed?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q34	If Reiki helped you feel less stressed, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Mood

Q35	Did you feel low in mood before Reiki last time?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q36	Did Reiki help lift your mood?	Not at all <input type="checkbox"/>	A little <input type="checkbox"/>	Quite a bit <input type="checkbox"/>	Very much <input type="checkbox"/>	Can't Remember <input type="checkbox"/>
Q37	If Reiki helped you lift your mood, how long did this feeling last?	Rest of the day <input type="checkbox"/>	A few days <input type="checkbox"/>	Up to 1 week <input type="checkbox"/>	Can't Remember <input type="checkbox"/>	

Thank you for completing this form

Please place the form in the envelope provided and put the sealed envelope into the drop box on your way out.

Q3: Pre-Sessions 2 and 5

Appendix F

Reiki Pilot Survey

We are interested in how you felt overall about your Reiki therapy sessions

There are no 'right' or 'wrong' answers. Your answers will be kept confidential. Thank you for your participation.

Your Name:

Date:

Physical Sensations/ Emotions:

Q38 Please list the words which best describe any physical sensations you felt after your Reiki sessions (*e.g. energised, warmth, tingling*).

Q39 Please list the words which best describe any emotions you felt during your Reiki sessions (*e.g. peace, balanced, sadness*).

Additional Feedback:

Q40 Are you likely to seek any more Reiki sessions elsewhere? Yes ☐ No ☐

Q41 Would you recommend Reiki to others? Yes ☐ No ☐


Q42 Please share any additional comments:


Thank you for completing this form.

Please place the form in the envelope provided and put the sealed envelope into the drop box on your way out.

Q4: Feedback Form Post Session 5

Appendix G





Is my study research?

To print your result with title and IRAS Project ID please enter your details below:

Title of your research:

A service evaluation study exploring the therapeutic effectiveness of a Reiki intervention in the local community of cancer patients.

IRAS Project ID (if available):

Not applicable.

You selected:

- 'No' - Are the participants in your study randomised to different groups?
- 'No' - Does your study protocol demand changing treatment/ patient care from accepted standards for any of the patients involved?
- 'No' - Are your findings going to be generalisable?

Your study would NOT be considered Research by the NHS.

You may still need other approvals.

Researchers requiring further advice (e.g. those not confident with the outcome of this tool) should contact their R&D office or sponsor in the first instance, or the [HRA](#) to discuss your study. If contacting the HRA for advice, do this by sending an outline of the project (maximum one page), summarising its purpose, methodology, type of participant and planned location as well as a copy of this results page and a summary of the aspects of the decision(s) that you need further advice on to the HRA Queries Line at HRA.Queries@nhs.net.

For more information please visit the [Defining Research](#) leaflet


Follow this link to start again.

[Print This Page](#)

NOTE: If using Internet Explorer please use browser print function.

[About this tool](#) [Feedback](#) [Contact](#) [Glossary](#)

Appendix H

From: **Queries HRA (HEALTH RESEARCH AUTHORITY)** hra.queries@nhs.net 
 Subject: RE: Enquiry re. a service evaluation study
 Date: 23 January 2015 at 11:16
 To: [REDACTED]

QH

ENQUIRY TO QUERIES LINE

Dear Neha

RE: [Assessing the effectiveness of Reiki on mental health outcomes in the local cancer community: A service evaluation for the [REDACTED]]

Thank you for your email regarding whether your project should be classified as research requiring NHS Research Ethics Committee (REC) review.

We note that you have used the HRA's decision tools which have provided a decision regarding whether the proposed project is classified as research and whether it requires review by an NHS REC. We note that you are seeking confirmation of that decision.

The results obtained from the [HRA's decision tools](#) can be taken as an authoritative decision and are line with:

- The harmonised UK-wide edition of the Governance Arrangements for Research Ethics Committees (GAfREC), which came into effect on 01 September 2011;
- Research Governance Framework for Health and Social Care (Second edition, 2005)
- The National Research Ethics Service (NRES) leaflet, *Defining Research* and the algorithm *Does my project require review by a Research Ethics Committee?*.

The decision obtained from the decision tools should not be interpreted as giving a form of ethical approval or endorsement to your project on behalf the HRA. However, it may be provided to a journal or other body as evidence if required.

Where a journal or other body (including any NHS organisation) states that they will not accept the copy of the results page from the HRA decision tool as evidence you should ask them to contact the HRA directly through this queries line email address.

Appendix I



for cancer support & information

... supporting people affected by cancer ...

NHS

NHS Trust

Exploring the therapeutic effectiveness of a Reiki intervention on health outcomes in a local cancer community:

A service evaluation for the [redacted] Centre

Agreement

I can confirm that the project "Exploring the therapeutic effectiveness of a Reiki intervention on health outcomes in a local cancer community" is of a non-invasive nature (questionnaire completion) and patients are not being asked sensitive or personal questions. Participants are receiving their Reiki as per the usual standard practice in the [redacted] Centre. Therefore, an application to the National Research Ethics Service (NRES) for ethical approval will not be required by the [redacted] NHS Trust. The project is being conducted as part of the Trainee Health Psychologist's employment at the Centre and as her clinical placement supervisor, I can confirm that it is acceptable to complete the study as part of a Professional Doctorate in Health Psychology programme at Queen Margaret University, Edinburgh.

Name of Trainee Health Psychologist: **Miss Neha Kunvardia**

Approved by Clinical Placement Supervisor:

T. E. Young
Signature

23/3/2010
Date

Mrs Teresa Young

Research Manager

Name of Clinical Supervisor

Position Held

Medical Director: Professor E J Maher

Appendix J



Queen Margaret University

EDINBURGH

Neha Kunvardia
Professional Doctorate Student
Psychology

Dawn Martin
Assistant Secretary, Governance and
Quality Enhancement
Queen Margaret University
Queen Margaret University Drive
Musselburgh
EH21 6UU

Tel: 0131 474 0000
Email: researchethics@qmu.ac.uk

6 March 2017

Dear Neha

Research title: Exploring the therapeutic effectiveness of a reiki intervention on health outcomes in a local cancer community

I am writing in relation to the above named research to confirm that all necessary documentation has been submitted to the Research Ethics Panel. Further, I can confirm that the Panel is satisfied of the following:

- That the project is of a 'non-invasive' nature
- That the organisation hosting the project has reviewed and agreed for the project to proceed
- That appropriate procedures and review processes have been followed for the project.

I hope that this confirmation is helpful. Should you require any further information, please let me know.

Yours sincerely

Dawn Martin
Acting Secretary to the Research Ethics Panel

**DIVISION OF GOVERNANCE AND QUALITY ENHANCEMENT
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Appendix K

Ward Referral Form – Reiki Therapy

*** Next Treatment Date:**

Ward Details *(please circle):*

10 11 Marie-Curie Chemotherapy Other (please state): _____ Chart Lodge Room No:

Patient Details:

Full Name: _____ Gender: M / F

Date of Birth: _____ OR

Address: _____
STICK ADDRESSOGRAPH LABEL
HERE

Phone No: _____

Hospital Number: _____

Clinical Details *(please complete):*

Consultant: _____ Primary Diagnosis: _____

Secondary Diagnosis: ☐ (Yes) If yes, please state the site of Disease: _____

Current Treatment (if any): Radiotherapy ☐ Chemotherapy ☐ Hormone ☐ Other *(please state):* _____

Reason for Referral: *(For Reiki)*

Comments:

	Yes
Mild-Moderate Depression	<input type="checkbox"/>
Mild-Moderate Anxiety	<input type="checkbox"/>
Tension	<input type="checkbox"/>
Fatigue	<input type="checkbox"/>
Sleep Problems	<input type="checkbox"/>
Nausea/ Vomiting	<input type="checkbox"/>
Digestive/ Bowel Disorder	<input type="checkbox"/>
Pain	<input type="checkbox"/>

Site/ Duration of Pain: _____

Other: _____

Referred By:

Name *(please print)*: _____ Position: _____

Contact Number: _____ Date: _____

October 2010

Ward Referral Form – Reiki Therapy

TO BE COMPLETED BY STAFF ONLY
(*LOGGING FORM*)

Comments:

Therapists Initials:

Date of Session:



Logged:




October 2010

Appendix L

a patient's guide

Reiki


Information for patients at
 Cancer Centre
Patient Information Series PI 31

 **NHS**
NHS Trust
 
... supporting people affected by cancer...

Consent

Before you start your complementary therapy you will need to give your consent by signing a consent form.

This is a legal requirement and will be discussed with you at your first treatment.

Eligibility

All [REDACTED] services are offered free of charge to NHS patients under the care of an oncologist based at [REDACTED] Cancer Centre.

Private patients having treatment at [REDACTED] may also be eligible to use our services. Please call the helpline for details on [REDACTED].

Donations

There is no charge for these sessions. All donations however small are gratefully received. They go towards our costs as these services are mainly funded by voluntary donations.

This leaflet has been produced by professionals, patients and carers from [REDACTED] Cancer Centre who have expertise and experience in the topics covered by this publication. All our publications are reviewed and updated regularly. Details of the references used to write this information are available from the Information Team at the [REDACTED] Centre.

A Patient's Guide to Reiki at [REDACTED] Cancer Centre

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Introduction

This leaflet explains the complementary therapy called Reiki. It answers some of the most commonly asked questions about Reiki. If you have any other questions, please ask our Reiki therapists at the [REDACTED] Centre [REDACTED].

Please note that we will usually inform your oncologist and G.P if you received one-to-one therapy.

Identification

It is a legal requirement for staff to check your name and details against your therapy record every time you attend.

What is Reiki?

Reiki is a complementary therapy, which can also be used alongside other therapies to help and support you.

The origins of Reiki

Reiki is believed to have originated in Tibet in the 1st century. However, in the 19th century, it was rediscovered by Dr Michael Usui, who took the methods back to his homeland in Japan. Later it was brought to the west by one of Dr Usui's patients, and is now known across the world.

What will happen when I come for this therapy?

The Reiki therapist will meet you in the [REDACTED] and talk through with you any general issues about your health.

The treatment will take place in a therapy room within the centre. You will not have to undress, apart from taking off your coat.

You will be able to receive the treatment either lying down or sitting, depending on whichever is easiest for you. The therapist may cover you with a blanket so that you are warm and comfortable.

What are the benefits to me?

People who have received Reiki say that it feels very relaxing and that they fall into a light sleep. They feel the quiet atmosphere enables them to have some 'peaceful space'. If you wish to talk through any thoughts that this therapy may release, the therapist will be able to listen and support you.

How long does a Reiki session last?

The entire session will last around 45 minutes so that you have time to talk with your therapist without feeling hurried.

How many sessions will I have?

You will be offered a short course of Reiki with us. Your therapist will discuss this with you at your first session.

Cancelling appointments

If you are unable to keep any of your appointments we would like 24 hours notice if possible. This is so that we can give your appointment to somebody else. Please telephone the therapists on [REDACTED] or the helpline on [REDACTED].

Where can I get therapies after I have finished treatments at the Centre?

Please ask for a list of independent therapists in the community. These therapists are qualified and have training from the [REDACTED] in using their therapy in cancer care.

These therapies are offered independently by the therapists on the list and not through the [REDACTED] or [REDACTED] Cancer Centre. You will need to be sure the therapist you choose is suitable for your needs, qualified and insured. You will then need to make your own private arrangements with them.

Therapist's name:

Telephone number:

Is there anything I should do after a treatment?

Some people feel very relaxed and want to go home to relax further. This is fine. Others may feel energised. This is fine as long as you do not overdo things.

Who can I contact for more information?

If you would like more information, please drop in to the [REDACTED] Centre or phone the Centre Helpline on [REDACTED] (see back page of this leaflet).

Other leaflets in our Complementary Therapy Series include:

- ☐ A Patient's Guide to Complementary Therapies (p.i. 16)
- ☐ A Patient's Guide to Ear Acupuncture (p.i. 18)
- ☐ A Patient's Guide to Reflexology (p.i. 29)
- ☐ A Patient's Guide to Aromatherapy & Massage (p.i. 38)
- ☐ A Patient's Guide to Relaxation & Breathing Techniques (p.i. 39)



Centre

support & information at [redacted] Cancer Centre
... supporting people affected by cancer...

This leaflet forms part of a series of publications produced by the [redacted].

If you would like further information about any aspect of cancer and its treatments, please drop in to the centre or call the Helpline.

The [redacted] is staffed by healthcare professionals and trained volunteers and is part of the [redacted] Cancer Centre.

Services offered at the [redacted] include:

- ☐ Drop-in centre for support and information
- ☐ Telephone helpline
- ☐ Benefits advice*
- ☐ Complementary therapies*
- ☐ Relaxation classes
- ☐ Counselling*
- ☐ Look Good...Feel Better™ beauty workshops
- ☐ Self-help courses

* These services are available to NHS patients under the care of an oncologist based at [redacted] Cancer Centre.

The [redacted] Centre is situated between the Cancer Centre and Gate 3 ([redacted])

Opening hours: Mon-Fri: 9.30am-1.00pm & 2.00-4.30pm

Telephone Helpline: [redacted]

Website: [redacted]



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Appendix M

Complementary Therapy Service – Agreement Form

	Yes	No
I agree to receive a course of Reiki at the [redacted] Centre on the understanding that up to 4 sessions will be offered to me free of charge*.	<input type="checkbox"/>	<input type="checkbox"/>
I understand that I may withdraw from these sessions whenever I wish.	<input type="checkbox"/>	<input type="checkbox"/>
I agree to my GP and hospital consultant being made aware that I am receiving this therapy.	<input type="checkbox"/>	<input type="checkbox"/>
I agree that if the therapist is concerned about me during the course of my treatment he/she may contact my GP or an appropriate member of the hospital team treating me <i>(if you have any concerns about this then please discuss with your therapist prior to receiving your therapy)</i> .	<input type="checkbox"/>	<input type="checkbox"/>
I agree that my health profile has been discussed with me.	<input type="checkbox"/>	<input type="checkbox"/>
In the instance where the [redacted] wish to partake in a research study, I give full consent for the researcher(s) to have access to my patient records with the full understanding that the information will be kept confidential and used only for the purpose of the research study.	<input type="checkbox"/>	<input type="checkbox"/>
I confirm that I have been given:		
Helpful Hints for Reiki – a guide for patients	<input type="checkbox"/>	<input type="checkbox"/>

** (optional) – a donation would be much appreciated*

Name *(please print)*

Signed..... Date.....

Therapist *(signature)*..... Date.....

Appendix N

Patient's Health Profile

Client Details:

Full Name:

DOB:

Phone No:

Occupation:

Current Medical Situation:
Primary Diagnosis: Secondary Diagnosis: ☐ (Yes)

If yes, please state the site of disease:

Treatment:

Chemotherapy: Start..... End

Radiotherapy: Start..... End

Clinical Trial: Start..... End.....

Relevant Medical History:

Operations:

Other Serious Illness:

Other Conditions:

	Yes	No
Allergies	<input type="checkbox"/>	<input type="checkbox"/>
Asthma	<input type="checkbox"/>	<input type="checkbox"/>
Diabetes	<input type="checkbox"/>	<input type="checkbox"/>
DVT	<input type="checkbox"/>	<input type="checkbox"/>
Epilepsy	<input type="checkbox"/>	<input type="checkbox"/>
Heart Disease	<input type="checkbox"/>	<input type="checkbox"/>
Hypertension	<input type="checkbox"/>	<input type="checkbox"/>
Hypotension	<input type="checkbox"/>	<input type="checkbox"/>
Skin Conditions	<input type="checkbox"/>	<input type="checkbox"/>
Varicose Veins	<input type="checkbox"/>	<input type="checkbox"/>

Other:

Medication:

	Yes
Antiemetic Drugs	<input type="checkbox"/>
Anti-Diarrhoea	<input type="checkbox"/>
Analgesics	<input type="checkbox"/>
Laxatives	<input type="checkbox"/>
Steroids	<input type="checkbox"/>
Antibiotics	<input type="checkbox"/>
Anti-Inflammatory	<input type="checkbox"/>
Hormone-Related Therapy	<input type="checkbox"/>

Other:

Reason for Having Therapy:
Aim of Therapy:
General Questions:

General Health:

Emotional Health:

Sources of Support:

Had therapy before/ taking Vits/ Remedies:
Therapists Comments:

Appendix O

Checklist - Reiki Service Evaluation

Please follow this checklist in the correct order when administering the surveys at every visit, and mark each completed survey with a tick in the box. The surveys are self-completion. Please ensure that patients drop completed survey into the drop box. The researcher will collect them once a day.

Patient Name: *(please print)*..... **Patient ID:**.....

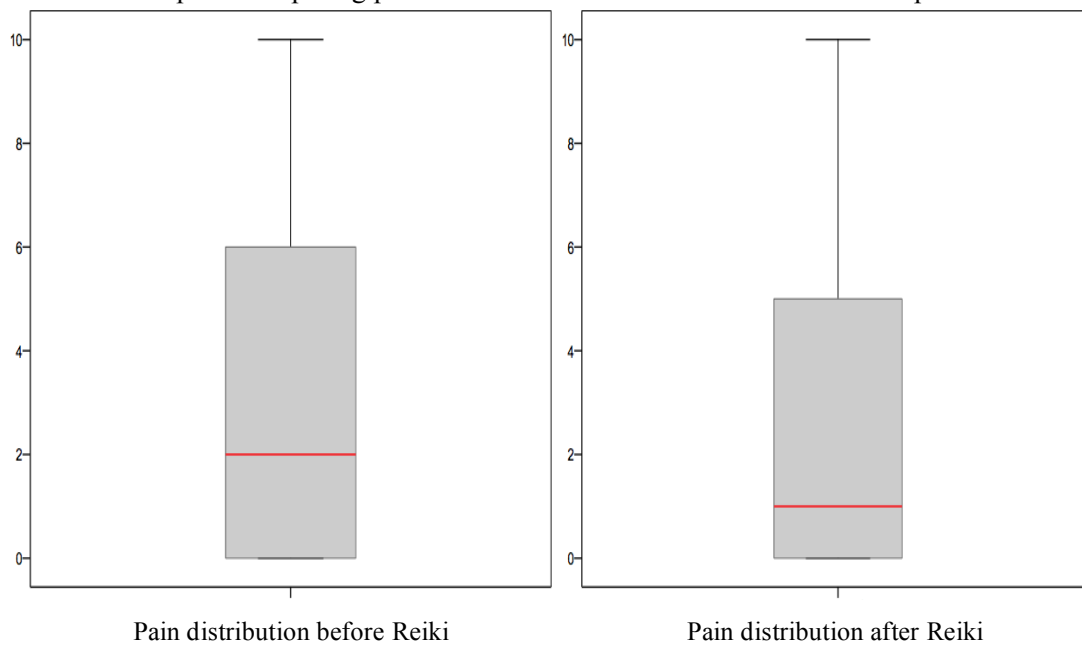
Therapy session 1		Completed
1	Reiki Therapy – Agreement Form	<input type="checkbox"/>
2	Patient's Health Profile	<input type="checkbox"/>
3	Q1 measure: Baseline pre-Reiki session 1	<input type="checkbox"/>
	<i>Patient Receives Reiki</i>	
4	Q2 measure: Immediately post-Reiki	<input type="checkbox"/>
Please ensure patient has placed the sealed envelopes into the drop box in the lobby		
Therapy session 2		Completed
5	Q3 measure: Pre-session 3 – Time 1	<input type="checkbox"/>
	<i>Patient Receives Reiki</i>	
Please ensure patient has placed the sealed envelopes into the drop box in the lobby		
Therapy session 3		
	<i>Patient Receives Reiki</i>	
Therapy session 4		
	<i>Patient Receives Reiki</i>	
Therapy session 5		Completed
6	Q3 measure: Pre-session 5 – Time 2	<input type="checkbox"/>
	<i>Patient Receives Reiki</i>	
7	Q4 measure – Exit survey	<input type="checkbox"/>
Please ensure patient has placed the sealed envelopes into the drop box in the lobby		

Therapist: *(Signature)*..... **Date:**.....

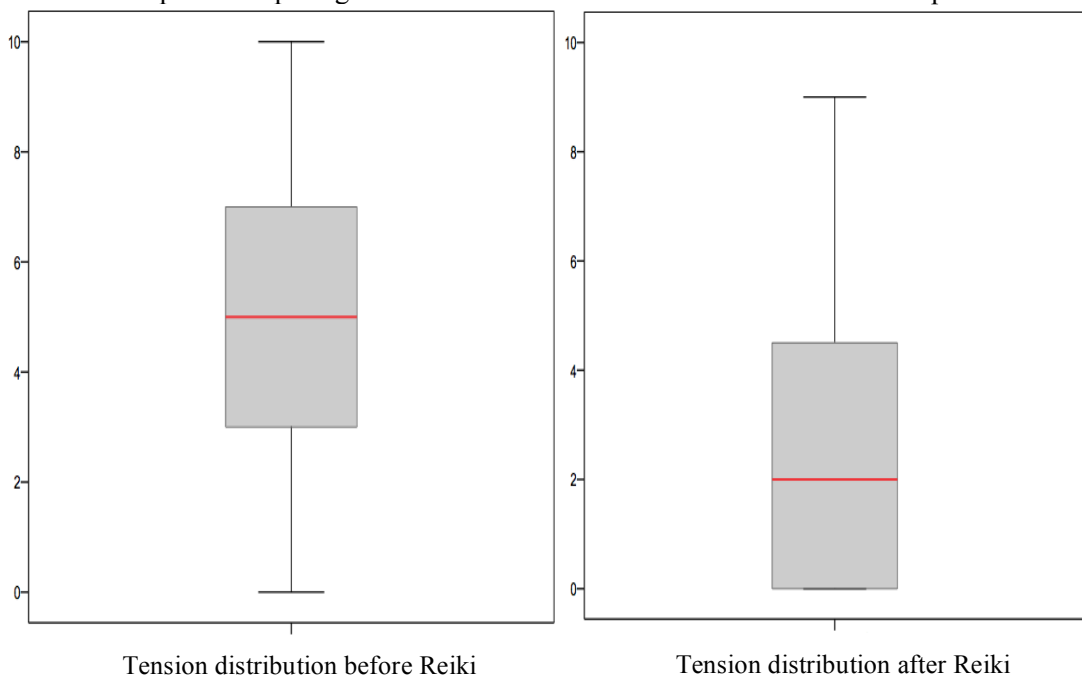
Please sign, date and return the completed checklist to the researcher after the final session.

Appendix P

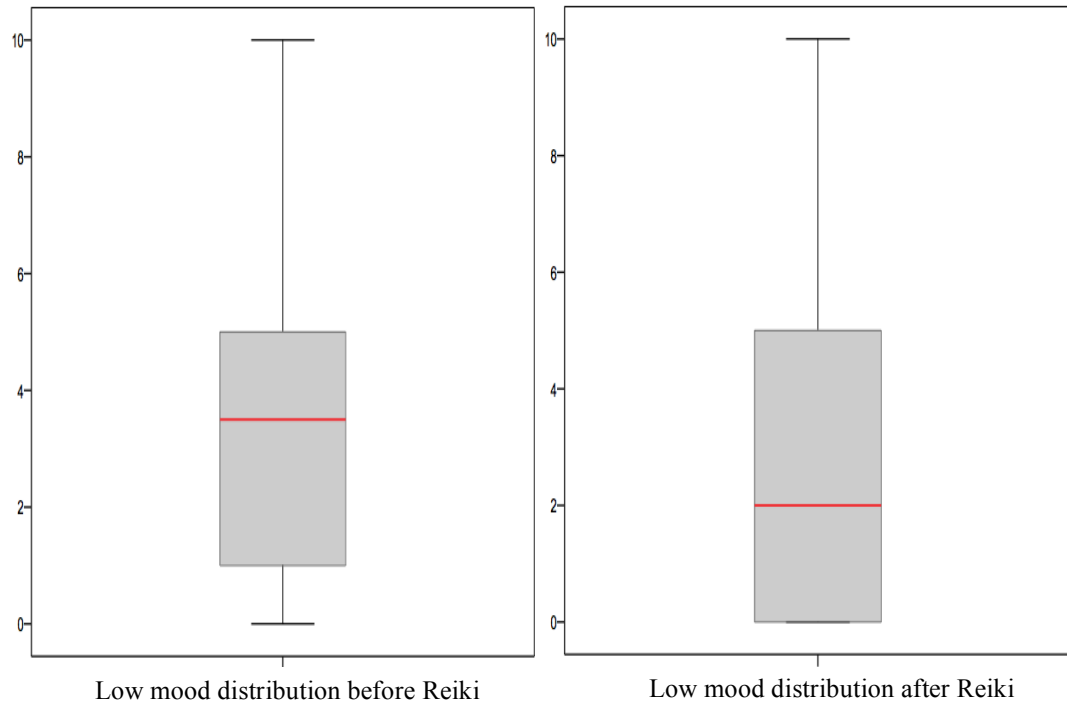
Boxplots comparing pain distributions before and after Reiki for inpatients.



Boxplots comparing tension distributions before and after Reiki for inpatients.

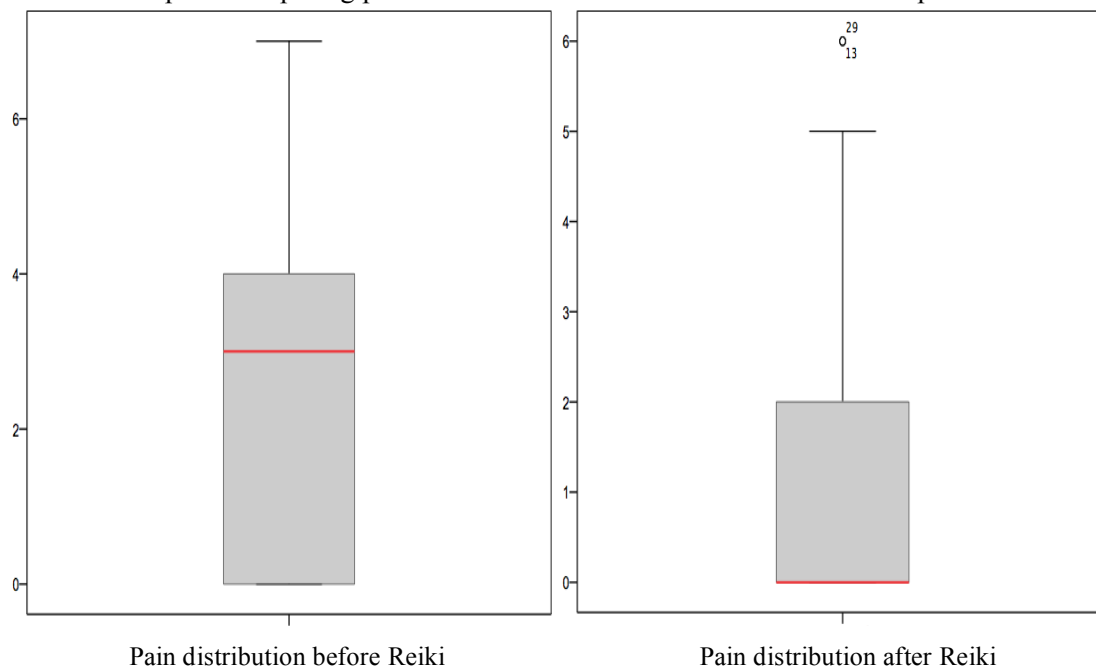


Boxplots comparing low mood distributions before and after Reiki for inpatients.

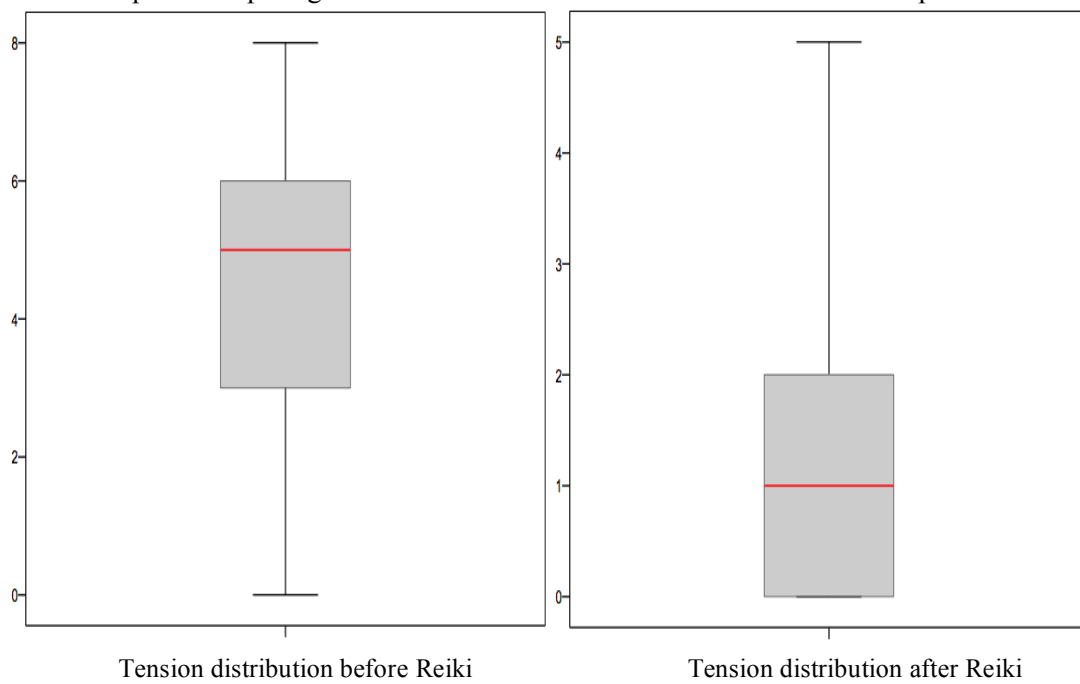


Appendix Q

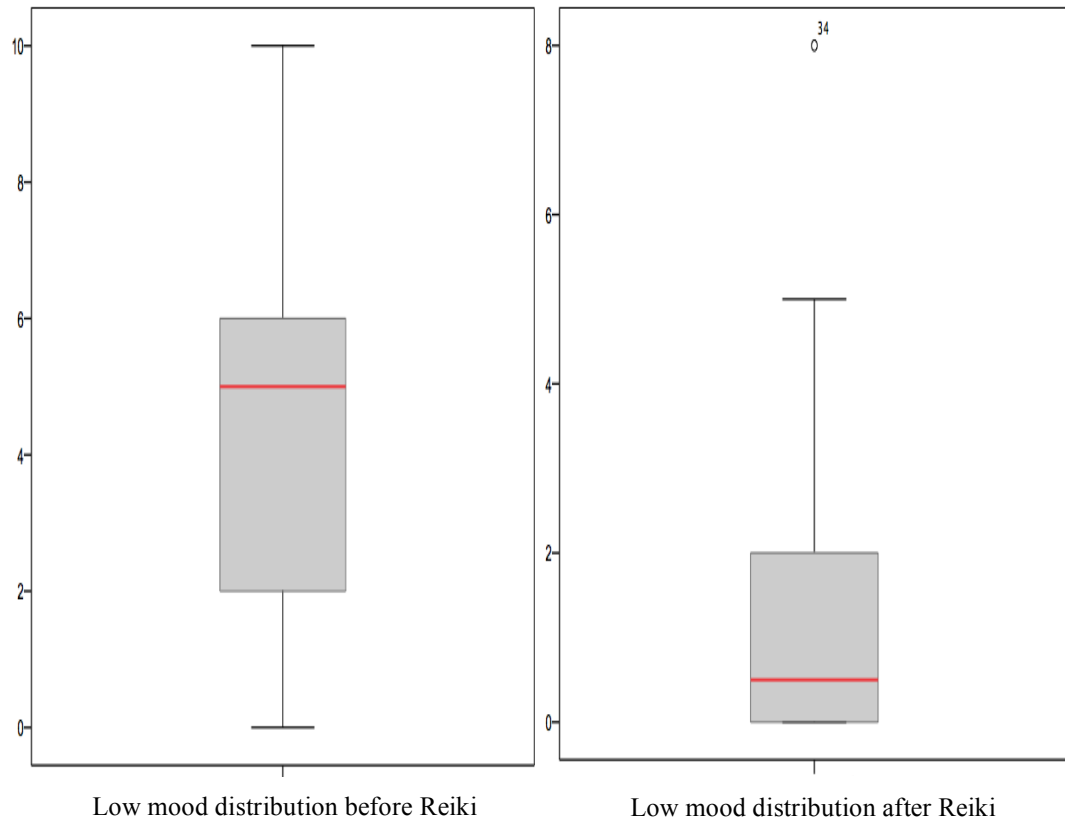
Boxplots comparing pain distributions before and after Reiki for outpatients.



Boxplots comparing tension distributions before and after Reiki for outpatients.



Boxplots comparing low mood distributions before and after Reiki for outpatients.



Appendix R

PAIN DATA AT TIME1 FOLLOW-UP

Questions: *Were you experiencing any pain before Reiki last time?*

Did Reiki help with your pain?

Experiencing pain before Reiki?	Total (n)	Did Reiki help with pain?	Frequency
Not at all	8	Not applicable	7
		Missing	1
A little	10	Missing	1
		Can't remember	1
		Not at all	1
		A little	5
		Quite a bit	1
		Very much	1
Quite a bit	2	A little	1
		Quite a bit	1
Very much	2	A little	1
		Very much	1
Missing data	3		
Total (n)	22		

Questions: *Did Reiki help with your pain?*

If Reiki helped with your pain, how long did this feeling last?

Did Reiki help with pain?	Total (n)	How long did this feeling last?	Frequency
Not applicable	10	Missing	10
Can't remember	1	Can't remember	1
Missing	2	Missing	1
		Up to 1 week	1
Not at all	1	Missing	1
A little	7	Missing	1
		Rest of the day	2
		A few days	4
Quite a bit	2	A few days	1
		Up to 1 week	1
Very much	2	A few days	2
Missing data	2		
Total (n)	23		

PAIN DATA AT TIME2 FOLLOW-UP

Questions: *Were you experiencing any pain before Reiki last time?*

Did Reiki help with your pain?

Experiencing pain before Reiki?	Total (n)	Did Reiki help with pain?	Frequency
Not at all	9	Not applicable	6
		Missing	3
A little	9	Not at all	2
		A little	3
		Quite a bit	3
		Very much	1
Quite a bit	2	Not at all	1
		Quite a bit	1
Very much	3	Quite a bit	2
		Very much	1
Missing data	2		
Total (n)	23		

Questions: *Did Reiki help with your pain?*

If Reiki helped with your pain, how long did this feeling last?

Did Reiki help with pain?	Total (n)	How long did this feeling last?	Frequency
Not applicable	8	Missing	8
Not at all	3	Missing	3
A little	3	Can't remember	1
		A few days	1
		Up to 1 week	1
Quite a bit	6	A few days	4
		Up to 1 week	2
Very much	2	Rest of the day	1
		A few days	1
Missing data	3		
Total (n)	22		

TENSION DATA AT TIME1 FOLLOW-UP

Questions: *Were you experiencing tension in your body before Reiki last time?*
Did Reiki help relieve your tension?

Experiencing tension before Reiki?	Total (n)	Did Reiki help relieve tension?	Frequency
A little	9	A little	2
		Quite a bit	5
		Very much	2
Quite a bit	10	A little	2
		Quite a bit	3
		Very much	5
Very much	6	A little	1
		Quite a bit	5
Total (n)	25		

Questions: *Did Reiki help relieve your tension?*
If Reiki helped with your tension, how long did this feeling last?

Did Reiki help relieve tension?	Total (n)	How long did this feeling last?	Frequency
A little	5	Can't remember	1
		Rest of the day	1
		A few days	3
Quite a bit	13	Rest of the day	2
		A few days	7
		Up to 1 week	4
Very much	7	Can't remember	1
		A few days	5
		Up to 1 week	1
Total (n)	25		

TENSION DATA AT TIME2 FOLLOW-UP

Questions: *Were you experiencing tension in your body before Reiki last time?*

Did Reiki help relieve your tension?

Experiencing tension before Reiki?	Total (n)	Did Reiki help relieve tension?	Frequency
Not at all	3	Missing	3
A little	8	Quite a bit	5
		Very much	3
Quite a bit	10	A little	1
		Quite a bit	3
		Very much	6
Very much	4	Quite a bit	2
		Very much	2
Total (n)	25		

Questions: *Did Reiki help relieve your tension?*

If Reiki helped with your tension, how long did this feeling last?

Did Reiki help relieve tension?	Total (n)	How long did this feeling last?	Frequency
Missing	3	Missing	2
		A few days	1
A little	1	A few days	1
Quite a bit	10	Rest of the day	3
		A few days	4
		Up to 1 week	3
Very much	11	Rest of the day	1
		A few days	5
		Up to 1 week	5
Total (n)	22		

CALMNESS DATA AT TIME1 FOLLOW-UP

Questions: *Were you feeling calm before Reiki last time?*

Did Reiki help you feel calm?

Feeling calm before Reiki?	Total (n)	Did Reiki help feel calm?	Frequency
Not at all	3	A little	1
		Quite a bit	2
A little	14	A little	1
		Quite a bit	9
		Very much	4
Quite a bit	5	Quite a bit	1
		Very much	4
Very much	3	Very much	3
Total (n)	25		

Questions: *Did Reiki help you feel calm?*

If Reiki helped you feel calm, how long did this feeling last?

Did Reiki help feel calm?	Total (n)	How long did this feeling last?	Frequency
A little	2	A few days	2
Quite a bit	12	Missing	1
		Can't remember	1
		Rest of the day	2
		A few days	5
		Up to 1 week	4
Very much	11	Can't remember	1
		Rest of the day	2
		A few days	4
		Up to 1 week	4
Total (n)	25		

CALMNESS DATA AT TIME2 FOLLOW-UP

Questions: *Were you feeling calm before Reiki last time?*

Did Reiki help you feel calm?

Feeling calm before Reiki?	Total (n)	Did Reiki help feel calm?	Frequency
Can't remember	2	Quite a bit	1
		Very much	1
Not at all	5	Quite a bit	4
		Very much	1
A little	8	Quite a bit	4
		Very much	4
Quite a bit	9	Quite a bit	4
		Very much	5
Very much	1	Very much	1
Total (n)	25		

Questions: *Did Reiki help you feel calm?*

If Reiki helped you feel calm, how long did this feeling last?

Did Reiki help feel calm?	Total (n)	How long did this feeling last?	Frequency
Quite a bit	13	Rest of the day	4
		A few days	6
		Up to 1 week	3
Very much	12	Missing	1
		A few days	5
		Up to 1 week	6
Total (n)	25		

ANXIETY DATA AT TIME1 FOLLOW-UP

Questions: *Were you feeling anxious before Reiki last time?*

Did Reiki help you feel less anxious?

Feeling anxious before Reiki?	Total (n)	Did Reiki help feel less anxious?	Frequency
Not at all	3	Missing	2
		Not at all	1
A little	13	Missing	1
		A little	3
		Quite a bit	7
		Very much	2
Quite a bit	8	A little	2
		Quite a bit	6
		Very much	1
Very much	1	Quite a bit	1
Total (n)	25		

Questions: *Did Reiki help you feel less anxious?*

If Reiki helped you feel less anxious, how long did this feeling last?

Did Reiki help feel less anxious?	Total (n)	How long did this feeling last?	Frequency
Missing	3	Missing	2
		Rest of the day	1
Not at all	1	Up to 1 week	1
A little	5	Rest of the day	2
		A few days	3
Quite a bit	14	Can't remember	1
		Rest of the day	2
		A few days	7
		Up to 1 week	4
Very much	2	Up to 1 week	2
Total (n)	25		

ANXIETY DATA AT TIME2 FOLLOW-UP

Questions: *Were you feeling anxious before Reiki last time?*

Did Reiki help you feel less anxious?

Feeling anxious before Reiki?	Total (n)	Did Reiki help feel less anxious?	Frequency
Can't remember	1	Quite a bit	1
Not at all	4	Missing	3
		A little	1
A little	15	A little	3
		Quite a bit	7
		Very much	5
Quite a bit	4	A little	1
		Quite a bit	2
		Very much	1
Very much	1	Very much	1
Total (n)	25		

Questions: *Did Reiki help you feel less anxious?*

If Reiki helped you feel less anxious, how long did this feeling last?

Did Reiki help feel less anxious?	Total (n)	How long did this feeling last?	Frequency
A little	5	Rest of the day	3
		A few days	2
Quite a bit	10	Rest of the day	3
		A few days	5
		Up to 1 week	2
Very much	7	A few days	1
		Up to 1 week	6
Missing data	3		
Total (n)	22		

STRESS DATA AT TIME1 FOLLOW-UP

Questions: *Were you feeling stressed before Reiki last time?*

Did Reiki help you feel less stressed?

Feeling stressed before Reiki?	Total (n)	Did Reiki help feel less stressed?	Frequency
Not at all	2	Missing	2
A little	12	A little	2
		Quite a bit	10
Quite a bit	5	A little	2
		Quite a bit	1
		Very much	2
Very much	6	Quite a bit	4
		Very much	2
Total (n)	25		

Questions: *Did Reiki help you feel less stressed?*

If Reiki helped you feel less stressed, how long did this feeling last?

Did Reiki help feel less stressed?	Total (n)	How long did this feeling last?	Frequency
A little	3	A few days	3
Quite a bit	15	Can't remember	1
		Missing	1
		Rest of the day	3
		A few days	6
		Up to 1 week	4
Very much	5	A few days	1
		Up to 1 week	4
Missing data	2		
Total (n)	23		

STRESS DATA AT TIME2 FOLLOW-UP

Questions: *Were you feeling stressed before Reiki last time?*

Did Reiki help you feel less stressed?

Feeling stressed before Reiki?	Total (n)	Did Reiki help feel less stressed?	Frequency
Can't remember	1	Can't remember	1
Not at all	4	Missing	4
A little	11	Quite a bit	6
		Very much	5
Quite a bit	5	Quite a bit	3
		Very much	2
Very much	4	Quite a bit	3
		Very much	1
Total (n)	25		

Questions: *Did Reiki help you feel less stressed?*

If Reiki helped you feel less stressed, how long did this feeling last?

Did Reiki help feel less stressed?	Total (n)	How long did this feeling last?	Frequency
Can't remember	1	Can't remember	1
Quite a bit	12	Rest of the day	4
		A few days	5
		Up to 1 week	3
Very much	8	Rest of the day	2
		A few days	1
		Up to 1 week	5
Missing data	4		
Total (n)	21		

LOW MOOD DATA AT TIME1 FOLLOW-UP

Questions: *Were you feeling low in mood before Reiki last time?*

Did Reiki help lift your mood?

Feeling low in mood before Reiki?	Total (n)	Did Reiki help lift mood?	Frequency
Can't remember	1	Can't remember	1
Not at all	7	Missing	3
		Quite a bit	3
		Very much	1
A little	9	A little	2
		Quite a bit	5
		Very much	2
Quite a bit	6	A little	1
		Quite a bit	2
		Very much	3
Very much	2	Quite a bit	2
Total (n)	25		

Questions: *Did Reiki help lift your mood?*

If Reiki helped you lift your mood, how long did this feeling last?

Did Reiki help lift mood?	Total (n)	How long did this feeling last?	Frequency
Can't remember	1	Can't remember	1
A little	3	Rest of the day	1
		A few days	2
Quite a bit	12	Can't remember	1
		Rest of the day	3
		A few days	6
		Up to 1 week	2
Very much	6	Rest of the day	1
		A few days	1
		Up to 1 week	4
Missing data	3		
Total (n)	22		

LOW MOOD DATA AT TIME2 FOLLOW-UP

Questions: *Were you feeling low in mood before Reiki last time?*

Did Reiki help lift your mood?

Feeling low in mood before Reiki?	Total (n)	Did Reiki help lift mood?	Frequency
Can't remember	1	Quite a bit	1
Not at all	5	Missing	4
		Quite a bit	1
A little	12	Quite a bit	6
		Very much	6
Quite a bit	4	Quite a bit	2
		Very much	2
Very much	3	Quite a bit	2
		Very much	1
Total (n)	25		

Questions: *Did Reiki help lift your mood?*

If Reiki helped you lift your mood, how long did this feeling last?

Did Reiki help lift mood?	Total (n)	How long did this feeling last?	Frequency
Quite a bit	12	Can't remember	1
		Rest of the day	5
		A few days	4
		Up to 1 week	2
Very much	9	A few days	1
		Up to 1 week	8
Missing data	4		
Total (n)	21		

TROUBLE SLEEPING DATA AT TIME1 FOLLOW-UP

Questions: *Did you have trouble sleeping before Reiki last time?*

Did Reiki help you to sleep?

Trouble sleeping before Reiki?	Total (n)	Did Reiki help with trouble sleeping?	Frequency
Not at all	5	Can't remember	1
		A little	1
		Quite a bit	3
A little	8	Quite a bit	8
Quite a bit	5	Can't remember	2
		A little	1
		Quite a bit	2
Very much	7	A little	3
		Quite a bit	2
		Very much	2
Total (n)	25		

Questions: *Did Reiki help you to sleep?*

If Reiki helped you to sleep, how long did this feeling last?

Did Reiki help sleep?	Total (n)	How long did this feeling last?	Frequency
Can't remember	3	Can't remember	2
		Missing	1
A little	5	Rest of the day	1
		A few days	4
Quite a bit	15	Rest of the day	2
		A few days	10
		Up to 1 week	3
Very much	2	A few days	2
Total (n)	25		

TROUBLE SLEEPING DATA AT TIME2 FOLLOW-UP

Questions: *Did you have trouble sleeping before Reiki last time?*

Did Reiki help you to sleep?

Trouble sleeping before Reiki?	Total (n)	Did Reiki help with trouble sleeping?	Frequency
Can't remember	1	Very much	1
Not at all	4	Missing	1
		Can't remember	1
		Not at all	1
		Very much	1
A little	12	A little	1
		Quite a bit	9
		Very much	2
Quite a bit	6	A little	2
		Quite a bit	1
		Very much	3
Very much	2	Quite a bit	1
		Very much	1
Total (n)	25		

Questions: *Did Reiki help you to sleep?*

If Reiki helped you to sleep, how long did this feeling last?

Did Reiki help sleep?	Total (n)	How long did this feeling last?	Frequency
Can't remember	1	Missing	1
Not at all	1	Missing	1
A little	3	Rest of the day	1
		A few days	2
Quite a bit	11	Can't remember	1
		Rest of the day	2
		A few days	5
		Up to 1 week	3
Very much	8	Rest of the day	1
		A few days	5
		Up to 1 week	2
Missing data	1		
Total (n)	24		

Appendix S

FREEDOM OF INFORMATION STATEMENT

To whom this may concern,

Data request under the Freedom of Information Act (2001)

Most Complementary Alternative Medicine (CAM) provision in the UK currently takes place within the private sector. There is an increase in the provision of Reiki therapy within the National Health Service (NHS), but there is no tangible evidence suggesting evaluations have been undertaken to evaluate its efficacy and benefit to patients. I would like to gather information about the provision of Reiki in the NHS, and the extent to which Reiki has been evaluated within the NHS.

Under the Freedom of Information Act (2001), I would like to request the following information from within your trust (Please specify if contracts are delegated to organisations outside of your trust):

1. Do you offer complementary therapies within the trust?
2. If yes, do you offer Reiki therapy?
3. Which types of services or departments offer Reiki therapy?
4. Have you conducted a formal evaluation of the Reiki service? If so, please provide brief details.

In addition, I would like to gather the following details about the provision of your Reiki service within the trust:

- Reason for offering Reiki therapy
- Length of time that Reiki therapy has been offered
- How many sessions of Reiki are provided/patient
- Number of qualified CAM therapists within the service
- Number of qualified Reiki therapists within the service
- Number of referrals to your CAM service
- Number of patients that have accessed your Reiki service
- Details about any psychological outcomes (e.g. anxiety, pain) shown to benefit from Reiki
- Details about any physiological outcomes (e.g. heart rate, blood pressure) shown to benefit from Reiki

Researcher Details:

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Many thanks in advance.